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CHAPTER 1

INTRODUCTION

Many researchers have studied the impact of ownership identity and concentration on the performance of corporations. Berle and Means (1932) find a positive association between ownership concentration and accounting profitability. Jensen and Meckling (1976) are the pioneers of research on the agency problem faced by owners of the corporation. Authors of the early essays focus on the conflicts of interest between shareholders and managers of the type that is found in Anglo-Saxon institutional environments. A corporation's shares are widely dispersed, so that no outside shareholder has a strong incentive to monitor managers carefully; managers do not hold large percentages of the shares, and thus do not have the same financial interest in the company as the shareholders. Subsequently, extensive research has been conducted on the consequences of the agency problem of the corporation.

Morck, Shleifer and Vishny (1988) study the relationship between percentage shareholdings of the board of directors and Tobin's q for the Fortune Five Hundred magazine corporations in the United States of America (USA). They use board ownership as a proxy for managerial ownership and argue that managerial ownership has two conflicting effects namely, an alignment effect and an entrenchment effect, which are explained below:

- Alignment effect: The alignment effect draws on the convergence of interests hypothesis. The higher the percentage shareholding of the board members, the higher is the positive effect of a rise in the company's value on their assets, which enhances their

wealth.

- Entrenchment effect: The higher the percentage shareholding of the board members, the lesser is the likelihood of them being replaced through a proxy fight or hostile takeover. This is referred to as entrenchment and results in higher discretion of the members to pursue their own goals.

Large shareholders address the agency problem of the company due to their incentives and ability to exert control over its operations. The behavior of large shareholders is modeled comprehensively in the study of Stulz (1988). He predicts a concave relationship between managerial ownership and firm value. In his model, the entrenchment effect of large shareholders becomes stronger than the alignment (incentive) effect as the shareholdings exceed a certain level, beyond which the large shareholders are able to block value-enhancing takeovers. The interpretation of these non-linear relationship patterns between ownership concentration and average q (Tobin's q) is that a single variable of ownership concentration captures the alignment effect as well as the entrenchment effect.

The literature suggests that the relationship between managerial ownership and company value is essentially non-linear in nature. Morck, Shleifer and Vishny report evidence of a nonlinear relationship between percentage shareholdings of the board of directors and the average q (Tobin's q) of the company. Average q (Tobin's q) rose from 0.75 when the board held no shares to slightly above 1.0 when it held 5 percent, and then fell reaching a value of only 0.70 at a holding of 25 percent of outstanding shares. From this point onwards average q (Tobin's q) rises again.

A number of studies report similar up/down/up relationships between ownership concentration and company performance (examples are Short and Keasey, 1999, McConnell and

Servaes, 1990, and Stulz, 1988). Short and Keasey (1999) analyze the relationship between managerial ownership and performance of 225 corporations in the United Kingdom. They measure company performance by the return on equity and the market to book ratios. For both measures of performance, the coefficients on directors' shareholding, square of directors' shareholding and cube of directors' shareholding are positive, negative and positive respectively and all are statistically significant.

McConnell and Servaes (1990) study a large sample of US companies and report an up/down relationship between managerial ownership and corporate performance as measured by average q (Tobin's q). They report an up/down relationship between managerial ownership and average q (Tobin's q). In other words, they observe only the first part of the inverted parabola in their data.

Lemmon and Lins (2003) use a sample of 800 companies from eight Asian emerging market countries to analyze the effect of ownership structure on average q (Tobin's q) during the Asian financial crisis. They observe deviations of cash flow rights from voting rights, which give an incentive to the controlling shareholders to expropriate outside shareholders. The crisis gave incentives to the controlling shareholders to expropriate outside shareholders because of a negative shock to the investment opportunities of the companies. They report that the average q ratios of companies that have a control-ownership disparity decline 12 percent more than the q ratios of other companies during the crisis, which began in July 1997 and ended in August 1998.

Kumar (2008) analyzes panel data of 2754 Indian companies for a period of 6 years (1994-2000). He uses return on assets (ROA) as the measure of company performance. In his study, institutional investors affect company performance positively once their ownership crosses

the threshold level of 15 percent. The shareholdings of the directors' influence performance positively beyond the threshold of 21 percent, which is consistent with the fact that many Indian corporations are family dominated enterprises. The above-mentioned thresholds are the minimum points of the U-shaped relationship estimated by him (please refer to chapter 3 for a detailed review of studies on India.

Chen, Cheung, Stouraitis and Wong (2005) analyze the ownership structures and financial data of 412 Hong Kong based companies for the 1995 to 1998 period. They arrive at non-linear relationships between family ownership and company value and accounting performance measures of the down/up/down pattern but the effects are only marginally significant. They are no significant effects of ownership variables on dividend payouts. However, they show a significantly negative relationship between payouts and family ownership of up to 10 percent.

Mak and Kusnadi (2005) report that the impact of insider shareholdings on average q (Tobin's q) is insignificant in Malaysia. They find that block shareholdings have a low positive effect on average q (Tobin's q), which is marginally significant. Tam and Tan (2007) report that foreign-owned companies have better accounting performance and higher valuations. In terms of accounting performance, individual controlled companies outperform only the government-owned companies. When average q (Tobin's q) is the measure of performance, the individual controlled companies fare better than both the government-owned and trust-owned companies.

Ang and Ding (2006) term the companies owned and controlled by Temasak Holdings (the government holding entity) as government linked companies (GLCs) and report that they have higher valuations and better corporate governance than a control group of non-GLCs.

Yeh, Lee and Woidtke (2001) use data from 1994-95 on a sample of 208 Taiwanese listed companies for studying the impact of ownership concentration on financial performance. Family-controlled companies with high levels of control have lower financial performance than family-controlled companies with low levels of control and companies that have dispersed ownership.

Wiwattanakantang (2001) shows that the presence of controlling shareholders is associated with better accounting performance for Thai companies. According to her argument, ownership is positively associated with performance partly due to the low intensity of agency problem in the family owned companies. In her view, Thai companies do not adopt pyramidal ownership structures, which is the reason for the low agency problem. However, the performance of family owned companies is lower when the controlling owner has a 25 percent to 50 percent shareholding stake in the company. Kim, Kitsabrunnarat and Nofsinger (2004) report that the operating performance of Thai companies deteriorates after initial public offerings (IPOs), and that the magnitude of the decrease in performance is much greater in Thailand as compared to the USA. They arrive at a non-linear relationship pattern (up, down, up) between managerial ownership and post-IPO change in performance that is consistent with the entrenchment and the alignment effects. The entrenchment effect is dominant in the range of ownership from 31 percent to 71 percent.

Joh (2003) uses a large sample of Korean companies, for estimating the relationship between ownership structures and accounting performance. The measure of accounting performance is the net income to assets ratio. She shows that ownership concentration has a substantial positive impact on accounting performance. However, companies with high control-ownership disparity have lower performance. This effect is especially true for

companies that are members of the top 30 chaebols. The results of Joh's study show that the impact of ownership on accounting performance is non-linear. In the interval below 5 percent company performance declines with ownership, whereas it increases sharply in the interval from 5 percent to 25 percent. Above the 25 percent level, performance increases gradually with ownership concentration.

Xu and Wang (1999) analyze the ownership and financial data of all companies listed on the Shanghai and Shenzhen stock exchanges over the 1993 to 1995 period and report a positive and significant correlation between ownership concentration and profitability. According to them, the impact of ownership concentration on profitability is stronger for companies dominated by legal person shareholders than for those dominated by the state. Specifically, profitability is positively correlated with the percentage of legal person shareholdings but it is either negatively correlated or uncorrelated with the percentage of state shares and shares held by individuals.

Sun, Tong, and Tong (2002) report that ownership concentration has a positive impact on partially privatized state-owned corporations. Keeping in view the situation, where state-owned enterprises are non-performing and also highly indebted, it is logical to argue that too much control is bad for these enterprises. On the other hand, very low state ownership in China means a lack of political support and business connections, which are essential for ensuring performance.

Liu and Sun (2003) argue that the absence of state-shares in the pattern of shareholding disclosed in a company's annual report does not necessarily indicate the non-existence of the ultimate control by the state. According to their analysis, the class of legal shares is only a veil of various identities of ultimate owners including both state and private. Whether and

to what extent this ambiguity dilutes the findings on the impact of shareholding classes on performance is difficult to predict. According to Jiang, Laurenceson and Tang (2008), the state-owned share proportion has a linear and positive impact on accounting performance.

Chen, Firth, and Xu (2008) analyze the identities of different state agencies from the perspective of controlling owners and linked ownership identity to performance. The operating efficiency of Chinese listed companies varies across the type of controlling shareholder. The companies controlled by the state-owned enterprises affiliated to the central government have the best performance followed by the companies controlled by the local government. Private-owned companies and companies owned by the state asset management bureaus have the worst performance.

According to Cueto (2008), higher voting rights held by the dominant shareholders are associated with lower average q (Tobin's q) in 170 companies from Brazil, Chile, Columbia, Peru, and Venezuela. The ratio of cash flow rights to voting rights held by the dominant shareholder is significantly associated with higher q values and this effect is twice as large in fixed effect regressions.

Carvalho da Silva and Leal (2006) analyze the ownership structures and financials of 236 Brazilian companies. They report that average q (Tobin's q) and ROA are positively related to cash flow rights concentration and negatively related to voting rights concentration and to the separation of voting rights from cash flow rights. The sample companies controlled by the government, foreign, and institutional investors generally have significantly higher valuation and performance than those owned by families.

Martinez, Stohr and Quiroga (2007) use a sample of 100 family-owned companies and 75 non-family owned companies for evaluating the impact of family ownership on the

performance of Chilean companies. According to them, the family-owned companies perform significantly better in terms of both accounting performance and company value. However, the results of this study were based on mean comparison tests without proper controls for other effects.

Chapter 2 comprises of analyses of the corporate governance regime in Pakistan and the ownership structures of corporations. Chapter 3 contains an empirical analysis of the effects of ownership concentration on performance. In chapter 4, I use a marginal return on investment, namely a marginal q , for testing hypotheses on investment performance and estimating the relationship between ownership concentration and performance. The performance of family-owned companies is compared with the performance of foreign-owned and state-owned companies. Furthermore, I present evidence on the agency problem of entrenchment.

CHAPTER 2

CORPORATE GOVERNANCE IN PAKISTANI CORPORATIONS

ABSTRACT

For studying corporate governance in Pakistan, two sets of institutions are analyzed. Firstly, I study the corporate governance structure of Pakistan as defined by its legal system i.e. the rules governing the election of directors, and composition of the company boards, takeovers, and other legal institutions and regulatory measures that affect the behavior of largest shareholders. The measures taken by the corporate and banking regulators for better disclosure of information in audited financial statements as well as for improving the quality of external audits are explained. Secondly, I analyze the identities and percentage shareholdings of largest shareholders of corporations. The stakes of largest shareholders equal to 20 percent or above for 97 percent of the companies, which depicts a high degree of ownership concentration. Applying the concept of ultimate ownership shows that families own 55 percent of the companies. Foreign investors and the state own 34.40 percent and 10.40 percent respectively.

2.1 CORPORATE GOVERNANCE

Under the heading of corporate governance institutions fall many things. Some institutions will be common to all companies in a country, like the laws and legal institutions of a country.

Others, like the number of members of the board of directors and the percentage of the board filled by independent directors, will differ from company to company within a country.

Before analyzing the corporate governance structure of Pakistan, I describe legal systems from the perspective of shareholder protection. La Porta, Lopez-de-Silanes, Shleifer and Vishny (1997, 1998) examine the content and historical development of legal institutions in different countries to determine, which ones best align shareholder and managerial interests. They conclude that the common law systems found in the Anglo-Saxon countries and former British colonies offer outside and minority shareholders greater protection against abuse of authority by managers than do civil law systems. Within the civil law systems, La Porta et al. differentiate between the system in the Scandinavian countries, and in those whose legal systems have a German or French origin. They claim that the Scandinavian system offers shareholders the best protection among the three civil law systems, while the French system provides shareholders the least protection among the three.

La Porta et al. (1997, 1998) have collected data pertaining to 49 countries on the legal rights of investors and their quality of enforcement. They analyze seven shareholder rights i.e. one-share-one-vote and six anti director rights. The anti director rights are the right of shareholders to mail proxy votes to the company, the possibility of cumulative voting for election of directors or mechanisms for proportional representation of minority interests on the board, existence of legal mechanisms against perceived oppression, preemptive right to new issues of shares, no requirement for shareholders to deposit their shares prior to the general shareholders' meeting and a low percentage of share capital required for calling an extraordinary shareholders' meeting. The right to a mandatory dividend is also considered as a substitute mechanism to protect minority shareholders. They aggregate shareholder rights

in each of the 49 countries by constructing an index labeled as anti director rights. The index is formed by allotting a score of either one or zero for each of the anti director rights measure discussed above. Pakistan received a score of 5 in this index.

La Porta, Lopez-de-Silanes, Shleifer and Vishny argue that concentration of ownership mitigates conflict between controlling shareholders and minority shareholders in those countries, where investor protection is low. If the legal system of a country does not protect the interests and rights of the investors they are reluctant to invest in the shares of corporations. Thus, low investor protection adversely affects the development of the financial markets because the investors are reluctant to invest in the financial instruments issued by corporations (see La Porta et al., 2002).

La Porta et al., (1998) express the view that measurement of creditor rights is more complicated. Since, there are different types of creditors, protecting one group might harm others. They also deal with the liquidation and reorganization aspects of creditor rights. They construct an index of creditor rights by adding one when (1) the country imposes restrictions, such as creditors' consent of minimum dividends to file for reorganization; (2) secured creditors are able to gain possession of their security once the reorganization petition has been approved (no automatic stay); (3) secured creditors are ranked first in the distribution of the proceeds that result from the disposition of the assets of a bankrupt company; and the debtor does not retain the administration of its property pending resolution of the reorganization.

To measure the strength of enforcement, La Porta et al., (1998) consider five measures that proxy law and order in different countries and also estimate the quality of a country's accounting standards. The law and order measures used by them were compiled by private credit risk agencies for the use of foreign investors interested in doing business abroad. These

measures are the efficiency of the judicial system, corruption, risk of expropriation by the government, law and order, and likelihood of contract repudiation by the government.

La Porta, Lopez-de-Silanes, Shleifer and Vishny argue that concentration of ownership mitigates conflict between controlling shareholders and minority shareholders in those countries, where investor protection is low. If the legal system of a country does not protect the interests and rights of the investors they are reluctant to invest in the shares of corporations. Thus, low investor protection adversely affects the development of the financial markets because the investors are reluctant to invest in the financial instruments issued by corporations (see La Porta et al., 2002). La Porta, Lopez-de-Silanes, and Shleifer (2008) predict that the common-law approach to the social control of economic life performs better than the civil-law approach in a world economy, which is free of war, financial crisis, and extraordinary disturbances.

2.2 CORPORATE GOVERNANCE STRUCTURE OF PAKISTAN

A sound institutional framework is a precondition for an effective corporate governance system. It is frequently argued that a strong institutional set up can foster transparency, accountability, equity and fairness. In Pakistan, the capital market regulatory institutions are the Securities and Exchange Commission of Pakistan, Karachi Stock Exchange (KSE), Lahore Stock Exchange (LSE) and Islamabad Stock Exchange (ISE). The State Bank of Pakistan (the Central Bank) being the regulator of the banking system, is responsible for the supervision of the scheduled commercial banks and development finance institutions.

Pakistan is a jurisdiction with an English-origin legal system in place by reason of conquest. All statutes in Pakistan are based on common law. Companies ordinance, 1984 is the statute for regulation of corporations in Pakistan. The listed companies (substantial acquisition of

voting shares and takeovers) ordinance 2008 stipulates takeover and ownership disclosure rules. In addition to the listing rules and the requirements of disclosures, this ordinance includes special regulations on transfer pricing. Among other things, the listed companies are required to inform the stock exchanges about dividends, annual general meetings (AGMs), capital increases and changes in their boards of directors.

The Securities and Exchange Ordinance was promulgated in 1969, which is the primary legislation for the regulation of the capital market. The Securities and Exchange Ordinance 1969 is the securities law, which provides for the protection of investors, market regulation, prevention of frauds and insider trading, and delisting of securities.

As per the Securities and Exchange Commission Act 1997, the Securities and Exchange Commission of Pakistan (hereafter referred to as SECP) is the regulator of the non-financial companies, the non-banking financial companies (NBFCs), insurance companies, and modarabas (Islamic financial institutions). The Institute of Chartered Accountants of Pakistan is the regulatory body for supervision of accounting practices.

Code of Corporate Governance

The Securities and Exchange Commission of Pakistan notified the code of corporate governance in April 2002. The primary objective of the code of corporate governance is to ensure that the directors of a listed company supervise its operations for safeguarding the interests of a diverse range of stakeholders. It lays down the requirement of restructuring of the composition of board of directors for introducing representation of the minority shareholders. The directors are required to discharge their fiduciary responsibilities in the larger interest of all stakeholders in a transparent, informed, diligent, and timely manner. The code emphasizes openness and transparency in the corporate affairs and decision-making process. It stresses

on proper disclosure of performance and improvement in the external and internal audits of companies. The main features of the code are described below:

- It encourages representation of non-executive directors and those representing minority interests on the boards of directors of listed companies.
- It lays down the qualification and eligibility criteria for directors of listed companies.
- While reinforcing the powers, responsibilities and functions of the board of directors, the code formalizes the corporate decision making process and requires adequate documentation of policies and decisions of directors.
- It seeks to strengthen corporate working, internal control system and external audit requirements of listed companies.
- Corporate and financial reporting framework has been re-defined to foster better disclosure.
- Audit committees and internal audit functions are required to be established by all listed companies.

Every listed company is required to report on a prescribed format the break-up of the shareholding of various legal entities. Each company is also required to issue a statement of compliance with the code in its published annual financial report. This statement certifies about compliance with the provisions of the code regarding the system of internal controls, the corporate and financial reporting requirements, appointment of directors and functioning of a company's board, appointment of company secretary and chief financial officer, functioning of the internal audit department, and fulfillment of the statutory external audit requirements.

The code lays down the following requirements for the board of directors of a listed company:

- The board of directors of each listed company includes at least one independent director. It has been elaborated that the expression independent means a director who is not connected with the listed company or its promoters or directors on the basis of family relationship and who does not have any other relationship, whether pecuniary or otherwise, with the listed company, its associated companies, directors, executives or related parties. The test of independence principally emanates from the fact whether such person can be perceived as being able to exercise independent business judgment without being subservient to any apparent form of interference.
- Executive directors are not more than 75 percent of the elected directors including the chief executive. This condition does not apply to scheduled commercial Banks, which are required by the Central Bank to have not more than 25 percent of the directors as paid executives of the bank (please refer to the section on Corporate Governance in the Financial Sector for a description of the requirements for appointment of directors of banks and development finance institutions).
- With regard to the qualification and eligibility to act as director, the following conditions have been specified:
 - No listed company shall have as a director, a person who is serving as a director of ten other listed companies.
 - No person shall be elected or nominated as a director of a listed company if:
 - * his name is not borne on the register of national tax payers except where such person is a non-resident; and
 - * he has been convicted by a court of competent jurisdiction as a defaulter in payment of any loan to a commercial bank, a development financial institution

or a non-banking financial institution or he, being a member of a stock exchange, has been declared as a defaulter by the stock exchange; and

- * A listed company shall endeavor that no person is elected or nominated as a director if he or his spouse is engaged in the business of stock brokerage (unless specifically exempted by the SECP).

The requirements discussed above have been introduced to generate awareness of good governance of listed companies.

The limitations of the code are the absence of specific provisions on risk management and compensation policies pertaining to the board of directors.

Corporate Governance in the Financial Sector

Good corporate governance practices are necessary in financial companies for transparency in their operations and protection of the interests of depositors, investors and creditors.

Scheduled commercial banks and development finance institutions in Pakistan are regulated by the Central Bank (State Bank of Pakistan). Banking Companies Ordinance, 1962 is the statute for the regulation of scheduled commercial banks (hereafter referred to as banks) and development finance institutions.

The State Bank of Pakistan has taken several measures for improving corporate governance in banks and development finance institutions. These measures are as follows:

- Family representation on the board of directors of banks and development finance institutions has been limited to 25 percent of the total board size.
- To avoid possible conflict of interest and use of insider information, the directors and officers of brokerage companies have been disallowed to serve on the board of directors of banks and development finance institutions.

- The appointments of the board members and chief executive officers of banks and development finance institutions are screened so that they meet the fit and proper test prescribed by the State Bank of Pakistan.
- A detailed set of guidelines has been issued for the board of directors to develop policies and effectively oversee the management of banks and development finance institutions.

The banks and development finance institutions are required to comply with the Prudential Regulations of the State Bank of Pakistan (SBP) for conducting their business activities.

The Prudential Regulations stipulate that an independent director is a person who is not linked directly or indirectly with the bank or development finance institutions or its sponsoring shareholders. For the purpose of such determination, an independent director is a director who has not been employed by the bank or development finance institutions during the last five years or by the external auditors or legal advisors of the bank or development finance institutions.

Another requirement for an independent director is that the incumbent should not be an employee of a subsidiary of the bank or development finance institutions or of a company where the directors of the bank or development finance institutions have substantial beneficial interest (20 percent or more shareholding of the director either on his own or combined with his family members). Moreover, the director should not have been employed by a company of which an executive officer of the bank or development finance institutions has been a director within the last three years.

In addition to the requirements explained above, the banks and development finance institutions are also required to adhere to the provisions of the code of corporate governance.

The Securities and Exchange Commission of Pakistan (SECP) started functioning in

January 1999. At that time, the non-banking financial institutions comprised of separate companies for providing services of investment finance, leasing, asset management, housing finance, venture capital investment, and discounting services. For example, the business of leasing finance could only be conducted by leasing companies. For this reason, there was fragmentation in the non-bank financial sector and proliferation of institutions. These financial institutions usually had inadequate capital, low access to technology, and a high cost of operations, which increased their vulnerability to credit and market risk.

The primary objective of implementing the universal non-banking financial companies (NBFC) regime was to consolidate the non-banking financial services sector by allowing multiple financial activities under one umbrella, so that a variety of financial products tailored to the needs of customers could be offered through a one-window operation.

The SECP notified the non-banking financial companies (establishment and regulation) rules, 2003, which introduce the concept of a non-banking financial company (hereafter referred to as NBFC). The NBFC is defined as a company licensed by SECP to provide any one or more of the above-mentioned financial services.

An important measure for the protection of investors is that the SECP prohibited stock brokers from providing asset management services from the platform of a stock brokerage company in 2003. This regulatory action was taken to eliminate possible conflict of interest in the operations of asset management companies. It specifies that stock brokerage companies are required to establish separate companies for undertaking the business of asset management and investment advisory services. As a consequence of the above discussed regulatory measure, all the stock brokerage companies providing asset management and investment advisory services incorporated new companies for undertaking this business. Fresh licenses

were issued to these companies under the non-banking financial companies (establishment and regulation) rules, 2003 (hereafter referred to as NBFC rules, 2003) after fulfillment of the licensing requirements stipulated in these rules.

The SECP screens the credentials of the chief executive officer and directors of NBFCs prior to their appointment. With regard to the subject of the independence of directors of NBFCs, rule 7 of the NBFC rules, 2003 requires that at least one third of the directors be independent. At least two of the directors, excluding the chief executive officer, should have relevant experience of five years at the senior management level in the financial sector.

Disclosure and Auditing Requirements

The quality of a country's accounting system is vital for the proper functioning of its corporate governance regime. The accounting system in Pakistan is well established and corporations are required to prepare their financial statements in accordance with the international accounting standards.

In addition to the supervisory activities taken by the Institute of Chartered Accountants of Pakistan, the corporate and financial regulators also take initiatives for strengthening of audits of corporations in Pakistan. The Securities and Exchange Commission of Pakistan has developed a panel of auditors for auditing of companies in different sectors like non-banking financial companies, insurance, non-financial listed companies and non-listed companies having paid-up capital exceeding 7.5 million rupees. This panel is revised periodically for improving the quality of external audits.

For improving the quality of external audits of banks and development finance institutions, the State Bank of Pakistan (SBP) maintains a panel of auditors under Section 35 of the Banking Companies Ordinance, 1962. SBP requires banks and development finance institutions to

appoint their auditors from amongst this approved panel. The panel is periodically reviewed by SBP to upgrade/ downgrade the existing audit firms on the basis of evidence regarding them and also to accommodate new applicant audit firms.

An important way of improving disclosure by banks and development finance institutions is assuring credibility of their financial statements. It is mandatory for banks and development finance institutions to report the details of borrowers, and the amounts of loans, which have been written-off during the year. Another important disclosure is provisions for bad debts made during the year.

Disclosure of credit ratings of financial institutions to the general public is considered a measure of transparency. Credit ratings are immensely valued by investors, creditors, and regulators. Keeping in view this reason, the State Bank of Pakistan made credit rating compulsory for banks and non-banking financial institutions in 2001. Banks and non-banking financial institutions are required to disclose their credit ratings to the general public through electronic and print media (refer to Husain, 2003).

2.3 SAMPLE SELECTION AND THE PROCESS OF INFORMATION COLLECTION

I chose a sample of one hundred and twenty five companies listed on the Karachi Stock Exchange (KSE) on the basis of market capitalization of 30th June 2006. It covers all industries of the Pakistani economy except for financial institutions, whose capital is not comparable with that of non-financial companies. The sample's capitalization accounts for 98 percent of the total market capitalization of non-financial (hereafter referred to as industrial) companies listed on KSE. The shares of the sample companies are actively traded on KSE.

Securities and Exchange Commission of Pakistan's rules require every listed company

to disclose the number of its shares owned by legal entities in the annual financial report. Published annual financial reports were solicited from the company secretaries as well as from secondary sources. The secondary sources of the financial reports are given below:

- Elixir Securities, Jahangir Siddiqui Capital Markets, and First Capital Securities Corporation, which are the premier stock brokerage companies in Pakistan.
- MCB Bank, Pakistan.
- Central Bank of Pakistan (State Bank of Pakistan).
- Karachi Stock Exchange (KSE), Lahore Stock Exchange (LSE), and Islamabad Stock Exchange (ISE).

These sources provided hard copies of the financial reports, which were shifted to Vienna by courier and post. The ownership information of private limited companies used in tracing the ultimate ownership of the listed companies, was obtained from Securities and Exchange Commission of Pakistan (SECP). Apart from the ownership information of private limited companies, the ownership and financial data used in this dissertation was prepared manually from the financial reports and ancillary sources of information.

The above discussion on the data sources and collection process, shows the accuracy and reliability of the ownership information used in the analysis.

2.4 OWNERSHIP STRUCTURES OF PAKISTANI LISTED COMPANIES

The use of security design is a way around the one-share/ one-vote principle. Sponsors can control companies by issuing voting preference shares and common shares with multiple votes.

The Securities and Exchange Commission of Pakistan (hereafter referred to as SECP) notified a securities law in 2000 that allows companies to not only issue shares with difference

in dividend rights, but also issue shares with multiple votes. According to the Companies Share Capital (Variation in Rights and Privileges Rules), 2000, a company shall provide clauses in the memorandum and articles of association for issuance of shares with difference in dividend rights, common shares without votes, and common shares with multiple votes (hereafter referred to as dual class shares)

The second way around the one-share/ one-vote principle is to organize the ownership structure as a pyramidal structure. The pyramidal ownership structure is a structure in which an ultimate owner controls several entities by a chain of ownership relations. The ultimate owner of a company is either the state or a family or an association of persons.

The ownership structure of Fauji Fertilizer Bin Qasim (hereafter referred to as FFBQ) is an example of a pyramidal ownership structure. I illustrate the ownership structure of FFBQ in Figure 1. Fauji Fertilizer Company has 50.88 percent shareholding in FFBQ, whereas Fauji Foundation Trust and National Investment Trust have shareholdings of 17.29 percent and 0.11 percent respectively. The largest shareholder of FFBQ is Fauji Fertilizer Company.

Fauji Foundation Trust, with a shareholding stake of 44.35 percent, is the largest shareholder of Fauji Fertilizer Company. The analysis of the ownership structure of Fauji Fertilizer Company (FFC), shows that the Pakistan Army controls FFC and FFBQ, whereas the state is the ultimate owner of these companies.

National Investment Trust is fully owned by the state. Dispersed refers to the percentage of outstanding shares held by a large number of individual investors. The category- Public companies refers to the industrial companies, whose sponsors differ from the sponsors of FFBQ. The other outside shareholders comprise of non-governmental organizations (NGOs) and financial companies.

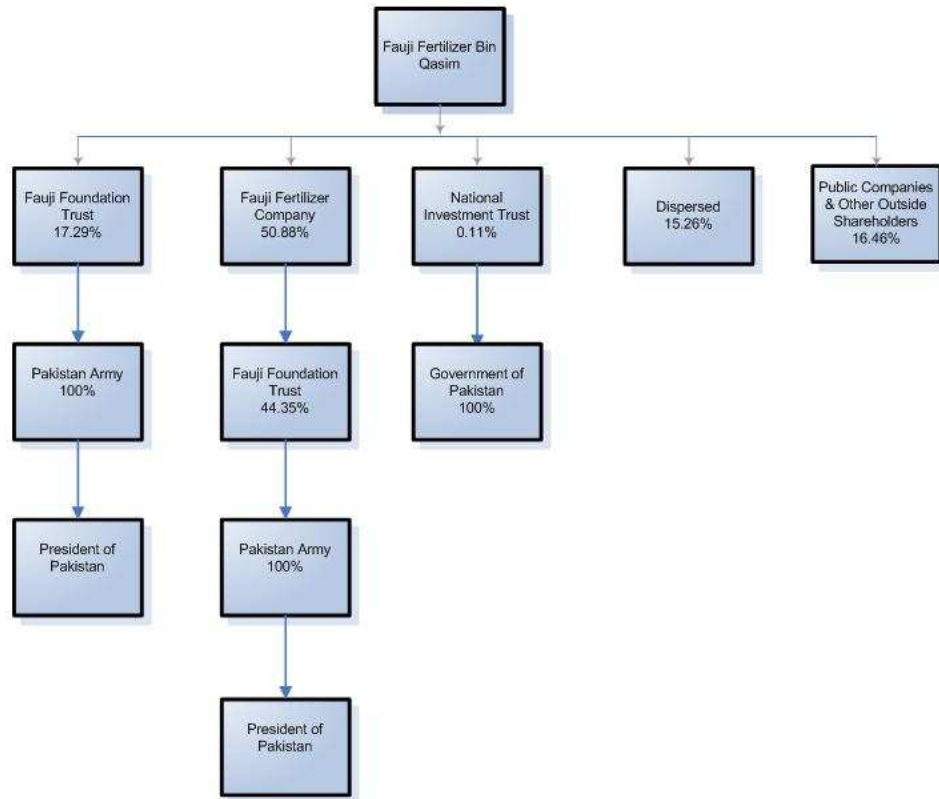


Figure 1. Fauji Fertilizer Bin Qasim

Voting rights (control rights) of the ultimate owner are 68.29 percent ($50.88 + 17.29 + 0.11$). Multiplying and summing over all relevant control chains, I come up with 40.05 percent of cash flow rights (cash flow stake), which is lower than the voting rights. The cash flow leverage or wedge (ratio of voting rights to cash flow rights of the ultimate owner) in this example is 1.70.

The ownership structure of Engro Chemicals is illustrated in figure 2. The largest shareholder of Engro Chemicals is Dawood Hercules Chemicals, which owns 38.13 percent of the outstanding shares of the company.

Corporate Governance

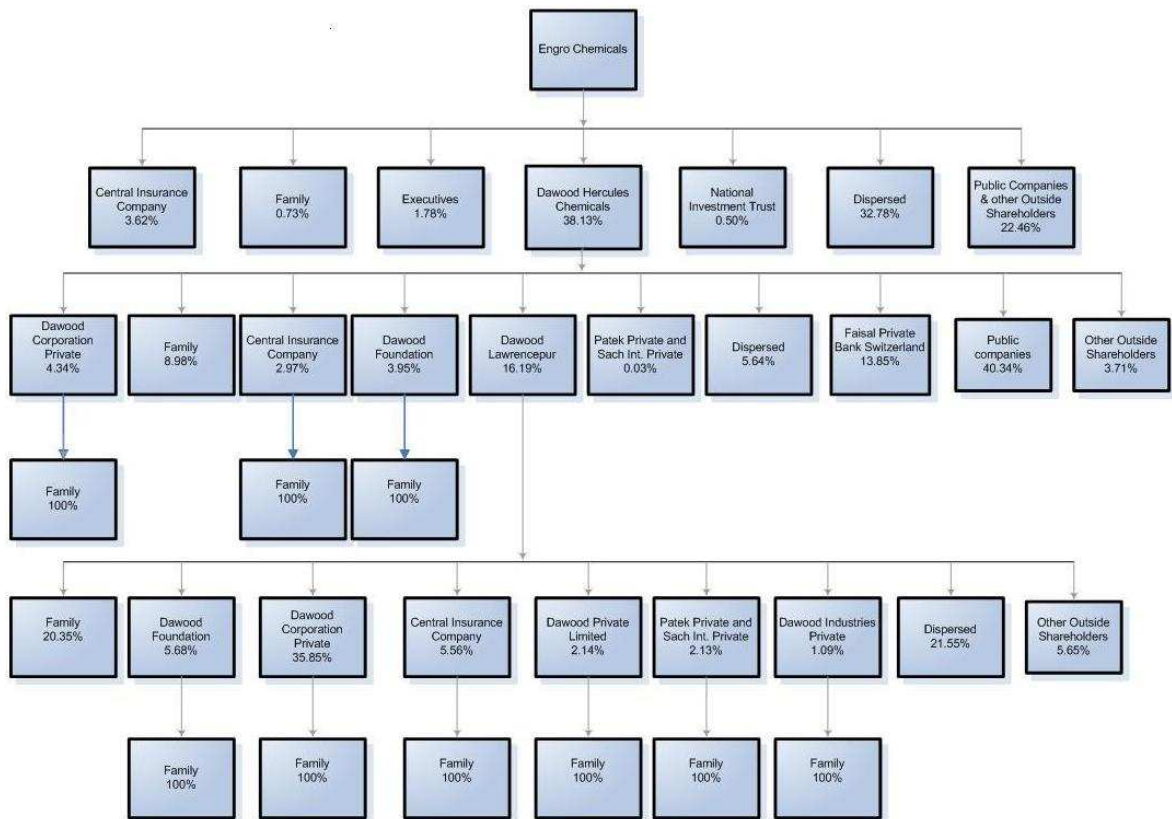


Figure 2. Engro Chemicals

The analysis of the ownership structure of Dawood Hercules Chemicals shows that Dawood Lawrencepur, with a stake of 16.19 percent, is the largest shareholder of the company. In order to ascertain the identity of the ultimate owner of Engro Chemicals, I analyze the ownership structure of Dawood Lawrencepur, which shows that Dawood Corporation Private Limited, with a shareholding stake of 35.85 percent is its largest shareholder. According to the information obtained from the records of SECP, Dawood Corporation Private Limited is fully owned by the sponsoring family. The analysis shows that the ultimate owner of Engro Chemicals is the family, whose voting rights are 44.26 percent

(3.62 + 0.73 + 1.78 + 38.13). The cash flow rights of the family in Engro Chemicals are computed as follows:

$$CFR = 3.62 + 0.73 + 1.78 + 38.13 \times (0.0434 + 0.0898 + 0.0297 + 0.0395 + 0.0003 + 0.1619 \times (0.2035 + 0.0568 + 0.3583 + 0.0556 + 0.0214 + 0.0213 + 0.0109)) = 18.35.$$

The cash flow leverage (wedge) in this example is 2.41. The separation of cash flow rights from voting rights leads to diversion of cash flows that enhances the personal assets of the owner. As a result of diversion, there is a reduction in the cash flows reinvested in the company, which accrue to the wealth of shareholders (refer to Almeida and Wolfenzon, 2006, pp. 2651-2657).

Companies in the lower levels of a pyramidal structure are expected to exhibit poor performance because owners at the top of the pyramid are empire builders. Another reason for expecting poor performance is that the distance between the top and a given company in the pyramid is too large for the owners to monitor the company effectively.

The ownership structure of Maple Leaf Cement is illustrated in Figure 3. Analysis of the shareholders of Maple Leaf Cement shows that Kohinoor Textile Mills (hereafter referred to as KTML) is the largest shareholder of the company. KTML owns 50.13 percent of the shares of Maple Leaf Cement. The sponsoring family owns 0.04 percent of the company's shares, whereas Zimpex (Private) Limited owns 0.01 percent of the shares. The information obtained from the records of SECP shows that Zimpex (Private) Limited (hereafter referred to as ZPL) is fully owned by the sponsoring family. ZPL's shareholding in Kohinoor Textile Mills is 15.47 percent, whereas the family's shareholding is 14.91 percent. The percentage voting rights of the owner in Maple Leaf Cement are 50.18 (0.01 + 0.04 + 50.13).

I multiply and sum over all relevant control chains for computing the percentage cash flow

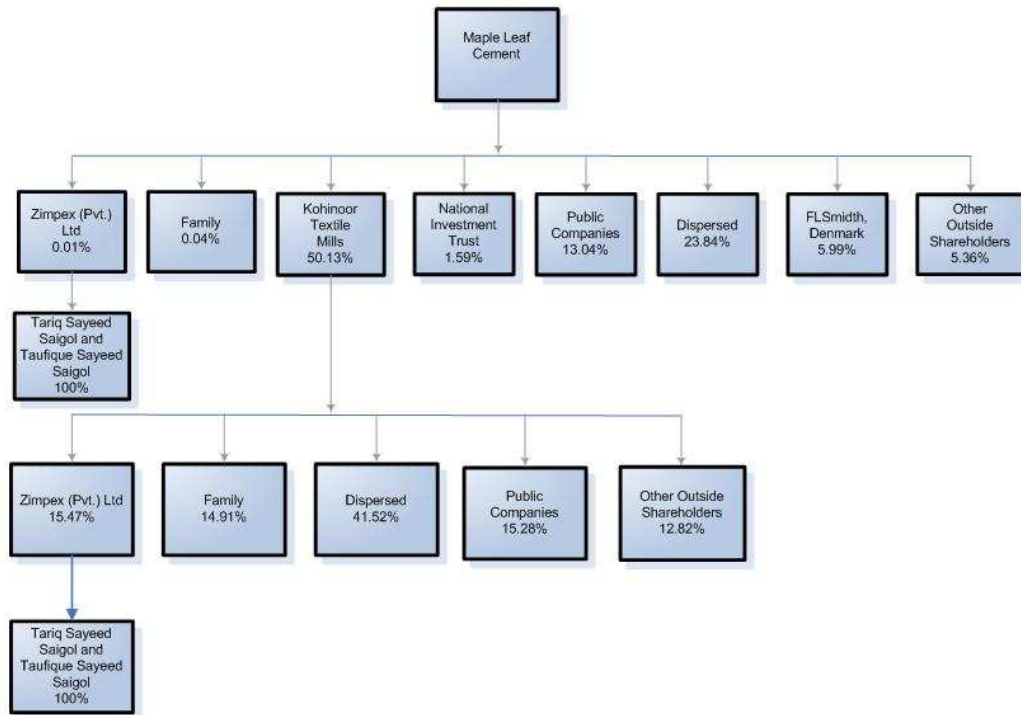


Figure 3. Maple Leaf Cement

rights, which are $15.28 (0.01 + 0.04 + 50.13 * (0.1547 + 0.1491))$. The cash flow leverage (wedge) is 3.28.

An ownership panel was setup to provide information on the ownership identity and percentage shareholdings of largest shareholders and ultimate owners. The results of the ultimate ownership panel are reported in table I (the column: Largest Shareholder shows the average percentage ownership whenever these identities are largest shareholders).

Corporate Governance

Table I. Number of largest shareholders (n), averages of largest shareholders' ownership stakes, voting rights (VR), cash flow rights (CFR), and wedge (cash flow leverage), and percentage of companies owned by ultimate owners

Category	n	Largest Shareholder	VR	CFR	Wedge	Percentage of Cos.
Families	38	48.03	54.35	53.20	1.10	55.20
Foreign	43	61.23	65.86	64.96	1.05	34.40
State	8	60.84	62.06	59.62	1.06	10.40
Public limited Cos.	10	36.25	-	-	-	
Private limited Cos.	13	46.51	-	-	-	
Trusts	5	40.28	-	-	-	
Holding Cos.	5	62.48	-	-	-	
Financial Institutions	2	30.56	-	-	-	
Public Sector Enterprises	1	45.73	-	-	-	

2.5 CONCLUDING SECTION

The corporate governance structure of Pakistan has been analyzed in this essay. Although the corporate governance regime has improved during the period under review, there is a need for better legal protection of outside shareholders, stricter enforcement of corporate laws, and improvement in the accounting standards.

Dual class shares have been found in two of the one hundred and twenty five ownership structures. In addition to dual class shares, nine companies have issued preference shares without votes. These are redeemable and pay a fixed dividend rate unrelated to the profits earned during the year.

The ownership structures of Pakistani corporations exhibit a high degree of concentration. 97 percent of the companies have shareholdings of largest shareholders equal to 20 percent or above.

Applying the concept of ultimate ownership to the structures shows that families own 55 percent of the sample, whereas foreign investors and the state own 34.40 percent and 10.40 percent respectively.

Despite the weakness of corporate governance institutions, there is low evidence of ownership structures with deviation of cash flow rights from voting rights, which worsens company performance because of the transfer of resources by ultimate owners from lower level companies to the top.

CHAPTER 3

THE EFFECTS OF OWNERSHIP

CONCENTRATION ON PERFORMANCE

ABSTRACT

An important issue in industrial organization is the impact of ownership concentration on corporate performance. A large sample of publicly listed companies is used for estimating the effects of ownership concentration on performance in Pakistan. I use panel data analysis for testing the effects of ownership concentration on corporate performance, which shows that firm fixed effects is not only safer than ordinary least squares but also safer than random effects. The fixed effects estimation technique shows that the cash flow rights of ultimate owners is negative, and the square of cash flow rights is positive. Leverage has a positive effect on performance. The entrenchment effect dominates the alignment effect till the cash flow right of 42.97 percent, where the slope of the curve is zero. Above this value the alignment effect dominates the entrenchment effect. Two important contributions are made to the literature on the effects of ownership concentration on performance. First, the fixed effects estimation technique is used for testing the effects of ownership concentration on corporate performance in Pakistan. Second, the results of this essay are better than existing studies on South Asian countries because they do not suffer from the endogeneity problem of reverse causality.

3.1 INTRODUCTION

Tobin introduced the Tobin's q variable in economics with the intention to examine the relationship between Tobin's q and investment. He defined Tobin's q as the ratio of market value of a company to the replacement cost of its assets. Tobin argued that companies have an incentive to invest if Tobin's q exceeds unity at the margin because the value of the fresh capital investment is expected to be higher than its cost (please refer to Lindenberg and Ross, 1981; also refer to Tobin, 1978). The pioneering insights of Tobin's work in macroeconomics have motivated researchers in microeconometrics to use Tobin's q or average q for estimating the relationship between performance and company-specific variables.

Morck, Shleifer and Vishny (1988) highlight a new aspect of managerial shareholdings: the larger the percentage of a company's shares held by its managers, the more entrenched they are. They hypothesize that shareholdings of the board of directors have a positive alignment effect and a negative entrenchment effect.

- Alignment effect: The alignment effect draws on the convergence of interests hypothesis. The higher the percentage shareholding of the board members, the higher is the positive effect of a rise in the company's value on their assets, which enhances their wealth.
- Entrenchment effect: The higher the percentage shareholding of the board members, the lesser is the likelihood of them being replaced through a proxy fight or hostile takeover. This is referred to as entrenchment and results in higher discretion of the members to pursue their own goals.

Morck et al. (1988) use shareholdings of the board of directors as a proxy for managerial shareholdings and arrive at a non-linear relationship between ownership concentration and

average q (Tobin's q).

Several authors have studied the effects of ownership concentration on company performance in India. Most of the early studies undertaken on India are at the industry level and structured in the traditional neo-classical framework. In the last decade a few Indian authors have exclusively focused on corporate governance in India. Sarkar and Sarkar (2000) focus on the relationship between the ownership stakes of directors' and corporate shareholders and company valuation as measured by the market to book ratio. They find that block-holdings by directors' increases company value after a certain level of shareholdings.

Pant and Pattanayak (2007) use a sample of 1833 Indian listed companies for estimating the impact of ownership variables on company performance as measured by average q (Tobin's q). The ownership variables comprise of the fraction of common shares held by the promoters', fraction of common shares squared, and fraction of common shares cubed. In accordance with their hypothesis, average q (Tobin's q) rises when the percentage shareholding of the promoters is less than 20 percent. It falls in the interval ranging from 20 percent to less than 49 percent. When the percentage ownership of the sponsors is 49 percent or above, average q (Tobin's q) rises again.

In section 2, I specify a model for testing the effects of ownership concentration on performance. Section 3 contains the summary statistics of the variables. In section 4, I present the results of the model. Section 5 contains an empirical analysis. Section 6 comprises of the conclusions of the essay.

3.2 MODEL SPECIFICATION

I use a firm fixed effects model to regress average q (Tobin's q) on the cash flow rights

(CFR) of ultimate owners, square of cash flow rights (CFR^2), leverage, shareholdings of outside institutional investors, company size, and growth. Leverage is hypothesized to affect performance positively because of tax advantages and the disciplinary role of debt. Institutional investors are expected to improve performance. Size and growth are expected to have positive coefficients because larger and older companies may have higher liquidity, more transparency and better disclosure and they receive more attention from equity analysts. Testing the marginal explanatory power of the variables shows that institutional shareholdings, size and growth should be excluded from the regression. The regression model is written in linear form as follows:

$$q_{it} = \alpha_i + \beta_1 CFR_{it} + \beta_2 CFR_{it}^2 + \beta_3 L_{it} + \mu_{it} \quad (1)$$

where q_{it} denotes average q of the i th company in the period t , CFR_{it} denotes the cash flow right of ultimate owner, CFR_{it}^2 denotes the square of the cash flow right, L_{it} denotes the leverage, and μ_{it} denotes the market's error in evaluating q_{it} .

3.3 DATA

The data were prepared manually from published annual financial reports of the listed companies and the Consumer Price Index (CPI) was used to convert the variables into real 1991 Rupees. The panels are unbalanced as shares of all the companies are not traded over the eleven year period. The stock prices data for the eleven years have been prepared from the records of daily newspapers Dawn and Business Recorder.

Leverage is approximated by the ratio of debt to total assets. Company size is measured by the natural logarithm of total assets, whereas growth is measured by the percentage change in annual sales. The statistics and correlation coefficients of the variables, which are significant

Table II. Statistics of variables and matrix of correlation coefficients

	<i>q</i>	CFR	L
Mean (Median)	1.62 (1.10)	56.72 (54.92)	0.14 (0.07)
	<i>q</i>	CFR	L
CFR	0.217***		
L	-0.031	-0.055**	

in the regression are reported in table II (triple star (***), double star (**) and single star (*) denote the significance levels of 1 percent, 5 percent and 10 percent respectively).

3.4 RESULTS

The fixed effects (FE) regression reports that the global level of average *q* (Tobin's *q*) is 1.63. The coefficient on cash flow rights (CFR) is negative and significant. Cash flow rights squared (CFR^2) is positive and significant. As per the expectation, leverage is positive and significant. The null hypothesis that CFR, CFR^2 , and leverage are jointly zero can be rejected at the one percent significance level.

The results of the fixed effects regression are reported in table III (the standard errors are reported in parentheses).

The Chow Test has the null hypothesis that deviations from the global level of average *q* (Tobin's *q*) are zero. The null hypothesis can be rejected because the probability of the F-

Table III. Firm Fixed Effects

Fixed Effects	Global level (α)	CFR	CFR^2	L	P>F	obs.
Coeff.(Standard error)	1.63 (0.479)	-4.41 (1.648)	5.12 (1.327)	0.63 (0.235)	0.000	1227
p-value	0.001	0.008	0.000	0.008		
Chow Test	Null Hypothesis	F	p-value	Comment		
	$H_0: u_i = 0 \forall i$	7.77	0.000	Fixed effects is safer than ordinary least squares (OLS)		

statistic under this test is 0.000. This shows that the fixed effects model is safer than ordinary least squares.

I run the fixed effects regression for the sub-sample of families, which accounts for 55 percent of the ultimate ownership. The results of the aforesaid regression are given in table IV (the standard errors are reported in parentheses).

The global level of average q (Tobin's q) is 1.41. CFR is negative and significant, whereas CFR^2 is positive and significant. The positive relationship between cash flow rights and performance beyond a certain threshold may be attributed to the fact that managers are *defacto owners* in family-owned companies. Leverage is positive and significant.

Table IV. Families as ultimate owners: Firm Fixed Effects

Fixed Effects	Global level (α)	CFR	CFR^2	L	P>F	obs.
Coeff.(Standard error)	1.41 (0.482)	-5.70 (1.729)	7.493 (1.425)	1.14 (0.273)	0.000	697
p-value	0.004	0.001	0.000	0.000		
Chow Test	Null Hypothesis	F	p-value	Comment		
	$H_0: u_i = 0 \forall i$	7.79	0.000	Fixed effects is safer than ordinary least squares (OLS)		

3.5 EMPIRICAL ANALYSIS

Ownership structures change very slowly over time. The best predictors of the identity of a company's largest shareholder and the size of her shareholding in a particular year are the identity and size of the shareholding last year (refer to Gugler, Mueller, and Yurtoglu, 2004). Although ownership variables change very slowly, I analyze the percentage changes in the owners' cash flow rights over time. The frequency distribution of the changes in the cash flow rights of owners is illustrated in figure 4.

The figure shows that the cash flow rights of the ultimate owners remained constant over time for 18.40 percent of the companies. Moreover, 58.40 percent of the companies have shown changes in the cash flow rights of less than 2 percent. Keeping in view the very low changes

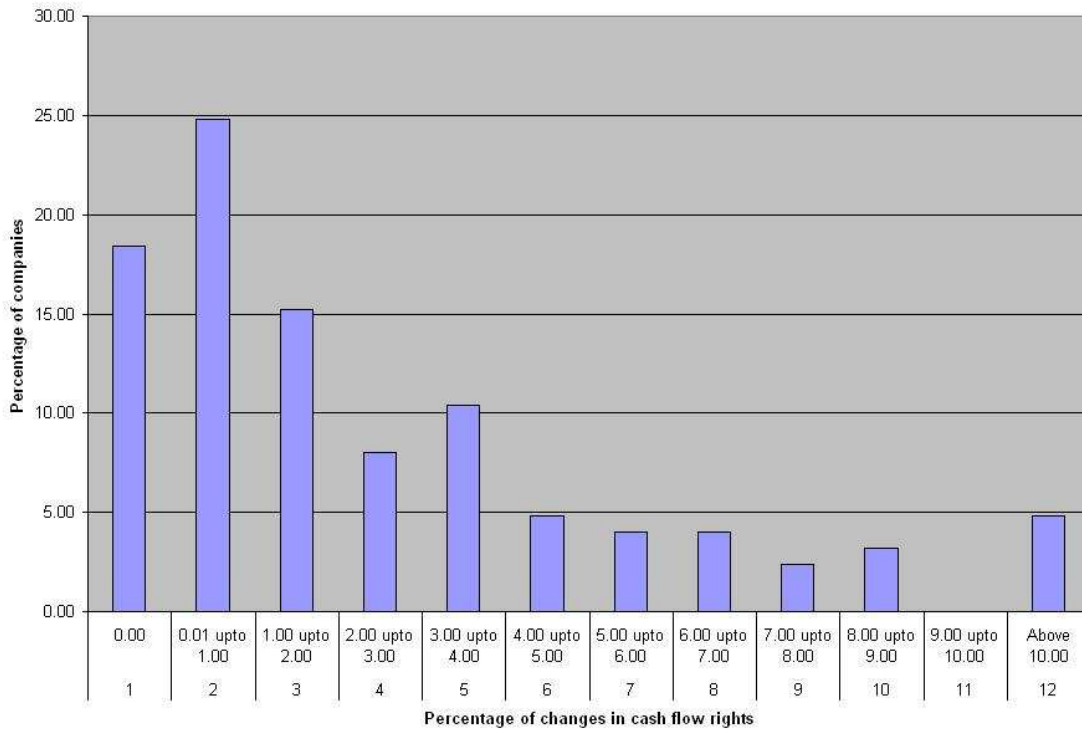


Figure 4. Percentage changes in the Cash Flow Rights

in the cash flow rights of ultimate owners over time, a way of estimating performance is to regress¹ average q (Tobin's q) on cash flow right (CFR), square of cash flow rights (CFR^2), leverage, shareholdings of outside institutional investors, company size, and growth using pooled data.

I run the random effects regression and apply the Hausman Test for comparing random effects with fixed effects (the results of the random effects regression are not reported to save space). The Hausman Test tests the null hypothesis² that the coefficients estimated by the efficient random effects (RE) estimator are the same as the ones estimated by the consistent fixed effects (FE) estimator. The results of the Hausman Test are reported in table V.

Table V. Hausman Test

Hausman Test	Null Hypothesis	Chi-square	p-value	comment
Random effects (RE) vs Fixed effects (FE)	H_0 : coefficients estimated by the efficient RE estimator are same as the ones estimated by the consistent FE estimator	23.19	0.000	FE is safer than RE

3.6 CONCLUDING SECTION

Testing the effects of ownership concentration on performance using a fixed effects estimation technique shows that the cash flow right (CFR) of ultimate owner is negative and significant, and the square of cash flow right (CFR^2) is positive and significant. As per the prediction of theory, leverage has a positive effect on performance.

This is the first essay in the case of Pakistan that uses analyses based on panel data for studying unobserved heterogeneity at the company level. The analysis shows that the firm fixed effects model is not only safer than ordinary least squares but also safer than random effects.

An important feature of this essay is that the results do not suffer from the endogeneity problem of structural reverse causality (refer to Demsetz and Lehn, 1985). The findings are better than the existing studies on South Asian countries, whose results are based on the ordinary least squares model (refer to Sarkar and Sarkar, 2000, please see Pant and Patyanak, 2007). The use of the fixed effects estimation technique is a prudent way of dealing with the endogeneity problem of structural reverse causality.

The graph from the results of the fixed effects regression is illustrated in figure 5.

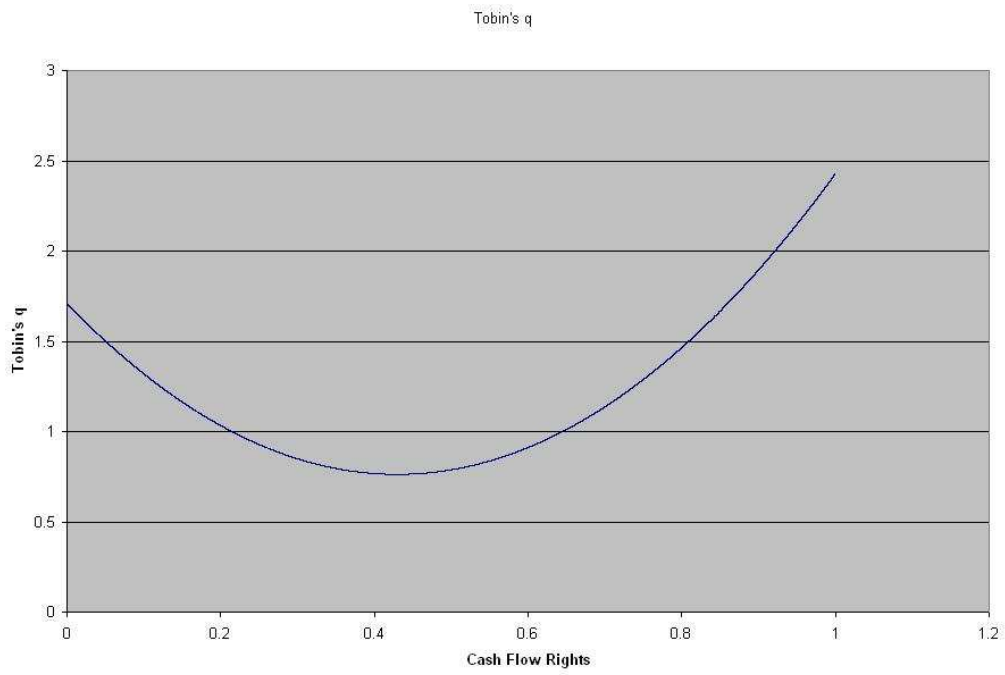


Figure 5. Cash Flow Rights of Ultimate Owners and Average q (Tobin's q)

25.60 percent of the companies fall in the interval upto 42.97 percent where the entrenchment effect dominates the alignment effect. Above this level, the alignment effect dominates the entrenchment effect and the owners have greater interest in managing the operations of the company in an efficient manner because they have to bear a greater proportion of a one rupee loss.

Chapter 4

Impact of Ownership Concentration on Performance

ABSTRACT

An important contribution is made to the literature on the effects of ownership variables on performance as a marginal return on investment, namely a marginal q , is used for studying the impact of ownership identity and concentration on the performance of Pakistani corporations. Family-owned companies earned returns on investment of 88 percent of their cost of capital, which shows the presence of agency costs in their governance structures. The returns on investment of family-owned companies are lower than the returns of foreign-owned companies. The state-owned companies earned returns on investment of only 65 percent of their cost of capital, which shows that state control negatively affects performance. The use of marginal q for estimating the relationship between ownership concentration and performance ensures that the causal relationship runs from the former to the latter. Testing the effects of ownership concentration on performance shows that the cash flow rights of owners is positive, and the square of cash flow rights is negative. There is strong evidence of entrenchment as the entrenchment effect dominates the alignment effect for 56.80 percent of the companies. In view of Pakistan's poor rating on contract enforcement (1.66), the strong evidence on the agency problem of entrenchment has repercussions for the protection of outside shareholders.

4.1 INTRODUCTION

Companies in developing countries face different investment opportunities than the companies in the developed countries. In the latter, mature companies have limited investment opportunities, which may force managers to over invest in the company's existing line of business or undertake unprofitable diversification into new lines of business.

On the other hand, a developing country may have many companies with sufficiently attractive investment opportunities so that no conflict between insiders and outside shareholders arises over the investment levels. Investors expect corporate investments to yield high returns. For this reason, they are willing to buy the shares of companies in developing countries even without strong legal or regulatory protection and the need arises for studying investment performance from the perspective of investors. In this essay, I use a measure of marginal return on investment (ratio of a company's return on investment to its cost of capital) for studying performance and for estimating the relationship between ownership concentration and performance.

Section 2 presents hypotheses on performance. Section 3 comprises of a model for estimation of performance and a model for estimating the alignment and entrenchment effects of ownership. In section 4, I present summary statistics of variables and explain disclosures such as equity issues and expenditures on intangibles. Section 5 comprises of hypothesis testing. In section 6, I present an empirical analysis of performance. Section 7 comprises of evidence on the agency problem of entrenchment. Conclusions are drawn in the final section of the essay.

4.2 HYPOTHESES

Hypothesis 1 (a)

The investment performance of family-owned companies is worse than the performance of foreign-owned companies.

Insiders of foreign-owned companies have higher motivation to carry out operations conscientiously as compared to family-owned companies.

Hypothesis 1 (b)

The performance of family-owned companies is better than the performance of state-owned companies.

Insiders of family-owned companies have higher motivation to carry out operations conscientiously as compared to state-owned companies.

4.3 MEASUREMENT OF INVESTMENT PERFORMANCE

I estimate performance by using a marginal return on investment- the ratio of a company's return on investment to its cost of capital (refer to Mueller and Reardon, 1993). Suppose I_t is a company's investment in period t , then its present value in period t is defined in equation 1 as follows:

$$PV_t \equiv \sum_{j=1}^{\infty} \frac{C_{t+j}}{(1 + i_t)^j} \quad (2)$$

Where PV_t is the present value of this investment I_t in the period (t), C_{t+j} is the cash flow generated from I_t in period ($t + j$), and i_t is the company's cost of capital in period (t).

As the capital market is assumed to be efficient, it makes an unbiased estimate of the present value of any investment in period t . One can then use the market's estimate of the present value

(PV_t) and the investment (I_t) that created it, to calculate the ratio of a pseudo-permanent return (r_t) on I_t to the company's cost of capital as defined in equation 2 below:

$$PV_t = \frac{r_t \cdot I_t}{i_t} = qm_t I_t \quad (3)$$

Where r_t is the pseudo-permanent return on I_t and i_t is the company's cost of capital. Equation 2 gives the ratio of the return r_t on I_t to i_t . If the company had invested the same amount I_t in a project that produced a permanent return r_t this project would have yielded exactly the same present value as the one actually undertaken. The ratio of r_t to i_t , qm_t , is the key statistic in my analysis. If a company maximizes shareholder wealth, then it does not undertake an investment that has a qm_t of less than one. I define the company's market value in equation 3 as follows:

$$M_t = M_{t-1} + PV_t - \delta_t M_{t-1} + \mu_t \quad (4)$$

Where M_t is the market value of the company at the end of period t , PV_t is the present value of I_t , δ_t is the depreciation rate for the firm's total capital, and μ_t is the market's error in evaluating M_t .

Subtracting M_{t-1} from both sides of (3) and using equation 2 to replace PV_t with $qm_t I_t$ yields equation 4:

$$M_t - M_{t-1} = qm_t I_t - \delta_t M_{t-1} + \mu_t \quad (5)$$

Where $M_t - M_{t-1}$ is the change in the company's market value during the period (t), and qm_t (marginal q) is the ratio of r_t to i_t .

The assumption of capital market efficiency implies that the expected value of μ_t is zero. Setting μ_t equal to zero and rearranging (4) yields:

$$qm_t = \frac{M_t - (1 - \delta)M_{t-1}}{I_t} \quad (6)$$

Marginal q is the change in the market value of the company divided by the change in the capital stock I_t that caused it. If a company's cost of capital, i_t is 0.10, $\delta_t = 0$ and it invests 100 at a return $r_t = 0.12$. The predicted increase in the market value using (4) is then 120 and qm_t is equal to 1.2.

A company's market value rises by more than the amount invested whenever $r_t > i_t$, and falls short of the value of I_t when $r_t < i_t$, abstracting from depreciation.

There are two benefits of using this model. The first benefit is that there is no need to calculate the cost of capital for measuring performance. The second benefit is that it allows for differences in risks across companies. Dividing both sides of (4) by M_{t-1} yields equation 6, which is stated below:

$$\frac{M_t - M_{t-1}}{M_{t-1}} = -\delta + qm \frac{I_t}{M_{t-1}} + \frac{\mu_t}{M_{t-1}} \quad (7)$$

Where $\frac{M_t - M_{t-1}}{M_{t-1}}$ is the change in the market value during the year t relative to the market value in the previous year (M_{t-1}), $-\delta$ is the depreciation, qm is the marginal q, and μ_t is the market's error in evaluating the change in the company's market value.

It is hypothesized in equation 6 that the change in market value of the company during the given year t is because of investment during the year, depreciation in the value of assets and factors other than investment, which are accounted for by the error term (μ_t). Equation 6 may be used to estimate both the depreciation rate and marginal q under the assumption that they are constant across companies or over time, or both.

A company's market value represents the market's evaluation of the total assets of the company. Market value of a company at the end of the accounting year t , M_t is defined as the sum of the market value of outstanding common shares, market or book value of outstanding preference shares, and book value of outstanding debt. Therefore, I use an equally

comprehensive measure of investment, which is defined as follows in equation 7 below:

$$I = CF + \Delta D + \Delta PS + \Delta CS + RND + ADV \quad (8)$$

Where CF is the cash flow³, ΔD is the enhancement or repayment of debt, ΔPS is cash received from issues of preference shares or the cash used for their redemption and ΔCS is the cash received from issues of common shares (please see section on data for information on disclosure of cash received from issue of share capital).

Research and development (RND) and advertising (ADV) expenditures are added because they are also forms of investment that produce intangible capital, which contributes to a company's market value. They are included in equation 7 to obtain a measure of the company's addition to its total capital. Depreciation also accounts for depletion of the intangible capital because of imitation.

The annual change in a company's market value is partly due to random changes in the stock market's sentiment. These changes in the market sentiment affect the market's valuation of the company's assets. In order to correct for these changes, I transform each variable in each year as a deviation from the sample mean.

Incentive and Entrenchment Effects Model

I present a model for estimating the impact of the ultimate owner's stake in the company on performance. The ultimate owner's stake leads to a positive alignment effect and a negative entrenchment effect, which are described below:

Alignment effect: The higher the percentage shareholding of the sponsoring owners, the higher is the positive effect of a rise in the company's value on their assets. This effect draws on the convergence of interests hypothesis and gives incentives to the owners for managing the company's operations in an efficient manner.

Entrenchment effect: The higher the percentage shareholding of the sponsoring directors, the lesser is the likelihood of them being replaced by outside shareholders. The entrenchment effect leads to higher discretion of the owners to pursue their own goals.

I argue that the cash flow right (CFR) of the owner captures the alignment effect as well as the entrenchment effect because of the lack of separation of management from owners. The squared term of cash flow rights (CFR^2) is also used in the model.

Intuitively, outside institutional investors are expected to be interested in improving performance. Testing the marginal explanatory power of institutional shareholdings (IT) shows that this variable should be excluded from the regression (please see appendix for the method used for testing the explanatory power of IT). The company size variable is measured by the natural logarithm of total assets.

The model discussed above is given in equation form below (refer to the appendix for derivation of the equation).

$$\begin{aligned} \frac{M_t - M_{t-1}}{M_{t-1}} = & \beta_0 + \beta_1 CFR \cdot \frac{I_t}{M_{t-1}} \\ & + \beta_2 CFR^2 \cdot \frac{I_t}{M_{t-1}} + \beta_3 S \cdot \frac{I_t}{M_{t-1}} + \mu_t \end{aligned} \quad (9)$$

Where $\frac{M_t - M_{t-1}}{M_{t-1}}$ is the ratio of the change in market value in period t to the market value in $t - 1$, CFR is the cash flow rights of owners, CFR^2 is the square of cash flow rights, and S is company size.

4.4 DATA

The data were prepared manually from published annual financial reports of the listed companies and the Consumer Price Index (CPI) was used to convert the variables into real

1991 Rupees. The panels are unbalanced as shares of all the companies are not traded over the eleven year period. The stock prices data for the eleven years have been prepared from the records of daily newspapers Dawn and Business Recorder.

The annual report of a listed company discloses the amount of cash generated during the year by issue of common shares. Moreover, there is disclosure of the cash received from issue of preference shares and the cash used for redemption of shares. The maximum number of issues of common shares during the eleven year period is seven. The research and development and advertising expenditures are also disclosed in the annual report. The percentage of companies in the sample that spend on research and development (RND) is 23 percent. 85 percent of the companies spend on advertising (ADV).

The statistics and correlation coefficients of the variables used in the empirical analysis are reported in Table VI (triple star (***), double star (**), and single star (*) denote the significance levels of 1 percent, 5 percent and 10 percent respectively).

Table VI. Statistics of variables and matrix of correlation coefficients

	$\frac{M_t - M_{t-1}}{M_{t-1}}$	$\frac{I_t}{M_{t-1}}$	CFR	S
Mean (Median)	0.22 (0.08)	0.23 (0.14)	56.72 (54.92)	15.82 (15.80)
	$\frac{M_t - M_{t-1}}{M_{t-1}}$	$\frac{I_t}{M_{t-1}}$	CFR	S
$\frac{I_t}{M_{t-1}}$	0.552***			
CFR	0.066***	-0.050		
S	0.056	-0.053	-0.080***	

The above information on the sources of information and the process of collection, shows the reliability of the ownership, financial and prices data used in the econometric modeling of the essay.

4.5 HYPOTHESES TESTING

In order to test hypotheses 1 (a) and 1 (b), I define the dummy variables Id_{FOR} and Id_{STATE} . The variable Id_{FOR} takes on the value one if a company has foreign ownership and zero otherwise. Id_{STATE} takes on the value one for a company owned by the state and zero otherwise. Id_{FOR} and Id_{STATE} are interacted with $\frac{I_t}{M_{t-1}}$. The regression equation used for testing the hypotheses is given below:

$$\begin{aligned} \frac{M_t - M_{t-1}}{M_{t-1}} = & -\delta + q_m \frac{I_t}{M_{t-1}} + \beta ID_{FOR} \cdot \frac{I_t}{M_{t-1}} \\ & + \Gamma ID_{STATE} \cdot \frac{I_t}{M_{t-1}} + \frac{\mu_t}{M_{t-1}} \end{aligned} \quad (10)$$

Where $\frac{M_t - M_{t-1}}{M_{t-1}}$ is the change in the market value during the year t relative to the market value in the previous year (M_{t-1}), $-\delta$ is the depreciation, $ID_{FOR} \cdot \frac{I_t}{M_{t-1}}$ and $ID_{STATE} \cdot \frac{I_t}{M_{t-1}}$ are interaction terms of the dummy variables Id_{FOR} and Id_{STATE} with $\frac{I_t}{M_{t-1}}$, and μ_t is the market's error in evaluating the change in the company's market value.

The results of Panel 1 are reported in Table VII (the standard errors are reported in parentheses). Panel 1's robust regression⁴ reports that depreciation is -0.06, which is significant. The joint hypothesis that the coefficients on $\frac{I_t}{M_{t-1}}$, $Id_{FOR} \cdot \frac{I_t}{M_{t-1}}$, and $Id_{STATE} \cdot \frac{I_t}{M_{t-1}}$ are zero can be rejected at the one percent significance level (p-value against the joint hypothesis test is 0.000). The return on investment is 0.88, which is significant. The coefficient on $Id_{FOR} \cdot \frac{I_t}{M_{t-1}}$ (β) is significant and positive, which is evidence in favor of hypothesis 1.

The null hypothesis in the one-tailed t test is that β is negative or zero and it can be rejected at the one percent significance level (p-value is 0.000). The one-tailed t test gives evidence

Table VII. PANEL 1

	$\frac{I_t}{M_{t-1}}$	$\frac{Id_{FOR} \cdot \frac{I_t}{M_{t-1}}}{Id_{STATE} \cdot \frac{I_t}{M_{t-1}}}$ /	p-value	Dep.	P>F	Adj.R²
Return on Investment	0.88(0.048)		0.000	-0.00(0.018)	0.000	0.29
Difference of Foreign		0.36(0.088)	0.000			
Difference of State		-0.02(0.157)	0.837			

that the returns for foreign-owned companies are higher than the returns for family-owned companies.

The robust regression for Panel 1 shows that $Id_{FOR} \cdot \frac{I_t}{M_{t-1}}$ is positive and significant (the results of the robust regression are not reported for saving space). The robust regression substantiates the evidence in favor of hypothesis 1.

Another explanation for the better performance of foreign-owned companies is that they receive transfers of management expertise and skills from abroad. Family-owned companies do not receive any of the aforesaid transfers.

There is no evidence of hypothesis 1 (b) because the coefficient on the interaction term $Id_{STATE} \cdot \frac{I_t}{M_{t-1}}$ (Γ) is insignificant.

Table VIII. PANEL 2

PANEL 2	$\frac{I_t}{M_{t-1}}$	$Id_{PUBLIC} \cdot \frac{I_t}{M_{t-1}}$	p-value	Dep.	P>F	Adj.R²
Return on Investment	0.96(0.044)		0.000	-0.00(0.018)	0.000	0.28
Difference of Public		-0.14(0.161)	0.383			
Robust regression	$\frac{I_t}{M_{t-1}}$	$Id_{PUBLIC} \cdot \frac{I_t}{M_{t-1}}$	p-value	Dep.	P>F	
Return on Investment	0.97(0.026)		0.000	-0.08(0.010)	0.000	
Difference of Public		-0.16(0.089)	0.070			

4.6 EMPIRICAL ANALYSIS

A triple⁵ agency problem applies to the companies owned by the public (state-owned companies). Keeping in view the nature of the agency problem, companies owned by the public are more likely to suffer from entrenchment as compared to companies owned by private entities. For comparing the performance of companies owned by the public with the performance of companies owned by private entities, we define the dummy variable Id_{PUBLIC} , which takes on the value one for a company owned by the public and zero otherwise. The results of Panel 2 are reported in Table VIII (the standard errors are reported in parentheses).

In panel 2, the return on investment is 0.96, which is significant. This panel's robust regression shows that depreciation is -0.08, which is significant. The return on investment is 0.97, which is significant. According to the panel's robust regression, the coefficient on the

Table IX. PANEL 3

	Dep.	qm_I	p-value (qm_I)	Obs.	P>F	Adj.R²
Full sample	-0.00(0.013)	0.98(0.040)	0.000	1227	0.000	0.31

interaction term of the dummy variable Id_{PUBLIC} with $\frac{I_t}{M_{t-1}}$ ($Id_{PUBLIC} \cdot \frac{I_t}{M_{t-1}}$) is negative and marginally significant.

The null hypothesis in the one-tailed t test is that $Id_{PUBLIC} \cdot \frac{I_t}{M_{t-1}}$ is negative or zero and it cannot be rejected (p-value is 0.965). There is evidence that the performance of companies owned by the public (state-owned companies) is worse than the performance of companies owned by private entities.

In accordance with equation 6, $\frac{Mt-Mt-1}{M_{t-1}}$ is regressed on $\frac{I_t}{M_{t-1}}$ in panel 3. The results of panel 3 are reported in Table IX (the standard errors are reported in parentheses). Return on investment is 0.96, which is significant. The robust regression for this panel reports that depreciation is -0.06, which is significant. The return on investment is 0.96 that is significant. The estimated error in the aforesaid equation is uncorrelated with $\frac{I_t}{M_{t-1}}$ (coefficient of correlation is -0.000).

In section 4, investment was hypothesized to enhance the market value of the company. Theoretically, a company's investment is positive. Empirically, investment may not be positive because of losses incurred during the year. I run the regression using the variables $\frac{Mt-Mt-1}{M_{t-1}}$ and $\frac{I_t}{M_{t-1}}$ for the non-negative values of the latter variable. In this panel, I use the regression variables without the transformation of $\frac{Mt-Mt-1}{M_{t-1}}$ and $\frac{I_t}{M_{t-1}}$ as deviations from the annual sample means. The robust regression reports that depreciation is -0.09. The return on

Table X. PANEL 4

	Dep.	qm_I	p-value (qm_I)	Obs.	P>F	Adj.R²
$I > 0$	-0.00(0.018)	0.96 (0.044)	0.000	1211	0.000	0.27

investment is 0.96, which is significant. The results of panel 4 are reported in Table X (the standard errors are reported in parentheses).

The depreciation in a company's market value during a given year depends on the nature of the capital that is invested in. The nature of capital depends on the industry, in which the company operates. In order to find evidence for this intuition, I run the regression with a full set of industry dummies using $\frac{M_t - M_{t-1}}{M_{t-1}}$ and $\frac{I_t}{M_{t-1}}$ variables without the above-mentioned transformation. The regression equation used in this panel is as follows:

$$\begin{aligned} \frac{M_t - M_{t-1}}{M_{t-1}} = & -\delta + \alpha_1 IND_1 + \alpha_2 IND_2 \\ & + \dots + \alpha_{n-1} IND_{n-1} + qm \frac{I_t}{M_{t-1}} + \frac{\mu_t}{M_{t-1}} \end{aligned} \quad (11)$$

Where $\frac{M_t - M_{t-1}}{M_{t-1}}$ is the change in the market value during the year t relative to the market value in the previous year (M_{t-1}), $-\delta$ is the depreciation, IND_i is a dummy variable that takes on the value one for industry i and zero otherwise, and qm is the marginal q .

Table XI presents the results of panel 5, which reports the differences of depreciation across industries (the standard errors are reported in parentheses). Panel 5 reports that depreciation is -0.08 and the investment return is 0.96. The robust regression shows that depreciation is -0.13, which is significant.

With the exception of the tobacco and oil and gas exploration industries, the coefficients

Table XI. Depreciation differences across industries (PANEL 5)

Industry	$-\delta / \alpha_i$	p-value	qm_I	Adj.R ²	robust regression: estimates
Technology and communication	-0.08(0.096)	0.382	0.95 (0.044)	0.28	-0.13(0.053)
Synthetic and Rayon	-0.01(0.115)	0.902			-0.01(0.090)
Textile Composite	0.02(0.108)	0.836			0.01(0.085)
Textile Spinning	-0.01(0.143)	0.956			0.01(0.112)
Textile Weaving	-0.02(0.191)	0.902			0.05(0.146)
Jute	0.17(0.185)	0.346			0.18(0.142)
Cooking Oil	-0.01(0.184)	0.970			0.03(0.141)
Sugar	0.01(0.118)	0.908			0.01(0.093)
Transport	0.12(0.140)	0.371			0.03(0.110)
Engineering	0.08(0.124)	0.514			0.04(0.097)
Fertilizer	0.16(0.124)	0.194			0.11(0.098)
Refinery	0.02(0.129)	0.894			-0.01(0.101)
Oil and Gas Marketing	0.03(0.123)	0.748			-0.00(0.096)
Oil and Gas Exploration	0.13(0.137)	0.029			0.09(0.108)
Power	0.05(0.124)	0.667			0.03(0.097)
Paper	0.03(0.132)	0.825			-0.00(0.103)
Glass	0.06(0.184)	0.706			0.20(0.141)
Tobacco	-0.33(0.147)	0.024			-0.19(0.115)
Cement	0.10(0.103)	0.334			0.07(0.081)
Cable and Electric	0.14(0.132)	0.281			0.02(0.103)
Chemicals	0.05(0.111)	0.613			0.01(0.087)
Pharmaceuticals	0.12(0.118)	0.320			0.08(0.093)
Food and Care	0.10(0.111)	0.368			0.04(0.087)
Automobile	0.16(0.107)	0.138			0.01(0.084)
Services	0.06(0.066)	0.356			0.07(0.093)

on the dummy variables of the industries are insignificant. These industries account for 5.60 percent of the sample. Furthermore, the robust regression reports that all the industry dummy variables are insignificant except for the tobacco industry, whose share in the sample is 1.60 percent.

I add interaction terms of industry dummy variables with $\frac{I_t}{M_{t-1}}$ ($IND_i \cdot \frac{I_t}{M_{t-1}}$) to the regression in equation 6 and run the regression using the variables $\frac{Mt-Mt-1}{M_{t-1}}$ and $\frac{I_t}{M_{t-1}}$ without the transformation as deviations from the annual sample means. With the exception of textile composite and automobile industries all interaction terms are insignificant (the results are not reported to save space).

Intuitively, depreciation may vary from company to company. I run the fixed effects regression and the regression's Chow test shows that ordinary least squares is better than fixed effects for the sample data. I apply the Hausman test for comparing fixed effects with random effects (the results of the fixed effects and random effects are not shown in tabular form to save space). This test shows that fixed effects is safer than random effects. The results of the Chow test and Hausman test are reported in Table XII.

For estimating the difference of the return for companies with cash flow leveraging (*wedge*) from the companies with cash flow rights equal to voting rights, I define a dummy variable *wedge*. This variable takes on the value one for companies with cash flow leveraging and zero otherwise. I add an interaction term of *wedge* with $\frac{I_t}{M_{t-1}}$ to the regression in equation 6 and run the resulting regression, which shows that $wedge \cdot \frac{I_t}{M_{t-1}}$ is insignificant (the full results are not shown to save space).

For estimating the return for internally financed investment, I define a dummy variable *internal* that takes on the value one for investment fully financed by cash flow and zero

Table XII. Chow Test and Hausman Test

Chow Test	Null Hypothesis	F	p-value	comment
	$H_0: u_i = 0 \forall i$	1.07	0.2979	ordinary least squares (OLS) is safer than fixed effects
Hausman Test	Null Hypothesis	Chi-square	p-value	comment
Random effects (RE) vs Fixed effects (FE)	H_0 : coefficients estimated by the efficient RE estimator are same as the ones estimated by the consistent FE estimator	5.50	0.019	FE is safer than RE

Table XIII. PANEL 6

	$\frac{I_t}{M_{t-1}}$	$Id_{Internal} \cdot \frac{I_t}{M_{t-1}}$	p-value	Dep.	P>F	Adj.R²
Return on Investment	0.77(0.057)		0.000	-0.05(0.008)	0.000	0.31
Difference for internally financed		0.29(0.079)	0.000			

otherwise. When the regression in equation 6 is run with *internal* interacted with $\frac{I_t}{M_{t-1}}$, the interaction term ($internal \cdot \frac{I_t}{M_{t-1}}$) is positive. There is no evidence of discretionary investment policies as the sign of the coefficient on the interaction term is contrary to the expectation. The results of Panel 6 are reported in Table XIII.

I analyze difference of the performance of state-owned companies, which have the Fauji Foundation Trust⁶ as the largest shareholder or as the controlling entity of the largest shareholder from the other state companies, which has been illustrated in figure 1 (pyramidal ownership structure of Fauji Fertilizer Bin Qasim). This charitable trust has been organized

Table XIV. PANEL 7

	$\frac{I_t}{M_{t-1}}$	$Id_{Trust} \cdot \frac{I_t}{M_{t-1}}$	p-value	Dep.	P>F	Adj.R ²
Return on Investment	0.65(0.152)		0.000	-0.05(0.024)	0.000	0.37
Difference for fauji foundation trust		0.39(0.208)	0.064			

to operate on a self-sustaining basis and so the companies owned by the trust are treated as distinct from the other companies. I define a dummy variable *trust* that takes on the value one if a company has the fauji foundation trust as the largest shareholder or as the controlling entity of the largest shareholder and zero otherwise. I run the regression in equation 6 for the sub-sample of companies owned by the public (state-owned companies) after interacting the dummy variable *trust* with $\frac{I_t}{M_{t-1}}$.

The results of panel 7 are reported in Table XIV (the standard errors are reported in parentheses). Depreciation is -0.05, whereas depreciation in the panel's robust regression is -0.07. The return on investment for state companies is 0.65, which is significant. In the one-tailed *t* test the null hypothesis is that the coefficient on the interaction term- $trust \cdot \frac{I_t}{M_{t-1}}$ is negative or zero. This hypothesis can be rejected at the 5 percent significance level (p-value is 0.032).

Findings

There is evidence that the agency problem of entrenchment in companies owned by the public negatively affects investment performance. When return on investment is estimated by using the positive values of investment, the estimate is not different from the regression for

the full sample. This shows that companies have been able to sustain the operating as well as non-operating expenditures. Applying the Chow test shows that ordinary least squares (OLS) is better than fixed effects. This evidence in favor of pooling of data adds strength to the results pertaining to investment returns.

The main finding is that depreciation does not differ across 98.40 percent of the sample.

4.7 INCENTIVE AND ENTRENCHMENT EFFECTS

In this section, I present results of the model on the impact of ultimate owners' cash flow stakes on performance (refer to table XV in the appendix for results of panel 8). The coefficient on $CFR \cdot \frac{I_t}{M_{t-1}}$ is positive and significant. The robust regression for this panel reports that $CFR \cdot \frac{I_t}{M_{t-1}}$ is positive and significant.

As per the expectation, the coefficient on $CFR^2 \cdot \frac{I_t}{M_{t-1}}$ is negative⁷ and significant. According to the robust regression, this variable is negative and significant. In view of the result that $CFR^2 \cdot \frac{I_t}{M_{t-1}}$ is unambiguously negative, there is evidence of entrenchment.

The variable $S \cdot \frac{I_t}{M_{t-1}}$ is positive and significant. The robust regression reports that this variable is positive and significant.

In order to check for differences of results across the categories of ownership, I interact the dummy variables Id_{FOR} and Id_{STATE} with $CFR \cdot \frac{I_t}{M_{t-1}}$, and $CFR^2 \cdot \frac{I_t}{M_{t-1}}$. When the regression in equation 8 is run with $Id_{FOR} \cdot CFR \cdot \frac{I_t}{M_{t-1}}$, $Id_{STATE} \cdot CFR \cdot \frac{I_t}{M_{t-1}}$, $Id_{FOR} \cdot CFR^2 \cdot \frac{I_t}{M_{t-1}}$, and $Id_{STATE} \cdot CFR^2 \cdot \frac{I_t}{M_{t-1}}$, these interaction terms are insignificant (the results are not reported to save space).

The return on investment function is illustrated in figure 6 (please see appendix for figure 6). The alignment effect dominates the entrenchment effect till the cash flow rights value

of 52.43 percent, where the slope of the curve is zero. Above this value, there is evidence that the entrenchment effect dominates the alignment effect. The intuitive explanation of the dominance of the entrenchment effect is that owners have higher discretion in pursuing their own goals.

4.8 CONCLUDING SECTION

Family-owned companies earned returns on investment of 88 percent of their cost of capital, which shows the presence of agency costs in their governance structures. The returns on investment of family-owned companies are lower than the returns of foreign-owned companies.

Returns of companies owned by the public (state-owned companies) are lower than the returns of companies owned by private entities. There is evidence that the nature of agency problem in state-owned companies negatively affects performance.

I find that state control has a negative effect on performance. The state-owned companies earned returns on investment of only 65 percent of their cost of capital. The fact that the returns fall far short of the costs of capital implies over-investments or poor investments in state companies. The state-owned companies with the Fauji Foundation Trust as the largest shareholder or as the controlling entity of the largest shareholder perform better than the other state-owned companies.

Testing the effects of ownership concentration on performance shows that the cash flow rights of owners is positive, and the square of cash flow rights is negative. There is evidence of entrenchment. I have used the marginal q measure for estimating the impact of ownership concentration on performance, which ensures that causality runs from ownership

to performance.

For 56.80 percent of the companies, the entrenchment effect is dominant over the alignment (incentive) effect, which is strong evidence of entrenchment. In view of Pakistan's poor rating on contract enforcement, the strong evidence on the agency problem of entrenchment has repercussions for the protection of outside shareholders.

NOTES

1. I do not report the results of pooled regressions using average q (Tobin's q) and ownership variables because they may be endogenously determined. Some studies try to determine the direction of the relationship between performance and ownership by using instrumental variables (IV) estimations. However, it is very difficult to find uncontroversial instruments, which are related to ownership but not to performance.
2. If the probability greater than chi-square is 0.05 or larger, the null hypothesis cannot be rejected and it is safe to use random effects. If we get a probability below 0.05, the null hypothesis is rejected and fixed effects should be used.
3. Cash flow is defined as profits after taxes plus depreciation expense, plus amortization expense, plus royalty expense, plus cash raised from disposal of assets minus gain on disposal of assets minus tax and dividend payments.
4. I run the robust regression by using the robust regression command: `qreg` in stata (see Hamilton, 1992).
5. A triple agency problem applies to the companies owned by the public i.e. parliament members are agents of citizens, bureaucrats are agents of parliament members and managers are agents of bureaucrats. Keeping in view the nature of the agency problem in companies owned by the public, managers have more discretion to indulge in on-the-job consumption as compared to managers of companies owned by private entities.
6. The Fauji Foundation Trust is a welfare organization (refer to the foundation's website www.fauji.org.pk for its profile). This charitable trust has been organized to operate on a self-sustaining basis and so the companies controlled by the trust should be treated as distinct from the other state-owned companies.

7. I run the regression in equation 8 with the interaction terms of industry dummy variables with $CFR^2 \cdot \frac{I_t}{M_{t-1}}$ ($IND_i \cdot CFR^2 \cdot \frac{I_t}{M_{t-1}}$). All the aforesaid interaction terms are insignificant except for the automobile industry (the results are not reported to save space).

APPENDIX

Definitions

- Leverage is the ratio of a company's long term debt to its total assets.
- Company size is the logarithm of total assets.
- Tobin's q is defined as the ratio of a company's market value to the book value of its assets.

The return on investment of a company is a function of CFR , CFR^2 , company size (S), institutional shareholdings (IT), leverage (L), research and development expenditure (RND), and advertising and sales promotion expenditure (ADV). Substituting this function into equation 6 yields a series of interaction terms between a company's $\frac{I_t}{M_{t-1}}$ and each of the above-mentioned variable. The equation is given below:

$$\begin{aligned} \frac{M_t - M_{t-1}}{M_{t-1}} = & \beta_0 + \beta_1 CFR \cdot \frac{I_t}{M_{t-1}} + \beta_2 CFR^2 \cdot \frac{I_t}{M_{t-1}} + \beta_3 S \cdot \frac{I_t}{M_{t-1}} + \beta_4 IT \cdot \frac{I_t}{M_{t-1}} + \beta_5 L \cdot \frac{I_t}{M_{t-1}} \\ & + \beta_6 RND \cdot \frac{I_t}{M_{t-1}} + \beta_7 ADV \cdot \frac{I_t}{M_{t-1}} + \mu_t \end{aligned} \quad (12)$$

Where $\frac{M_t - M_{t-1}}{M_{t-1}}$ is the ratio of the change in market value in period t to the market value in $t - 1$, CFR is the cash flow rights of owners, CFR^2 is the square of cash flow rights, S is

Table XV. Incentive and entrenchment effects of ownership

Panel 8		
Variable	Coefficient (standard error)	p-value
$CFR \times \frac{I_t}{M_{t-1}}$	4.32 (1.001)	0.000
$CFR^2 \times \frac{I_t}{M_{t-1}}$	-4.11 (0.815)	0.000
$S \times \frac{I_t}{M_{t-1}}$	0.12 (0.031)	0.000
Adj-R ²	0.34	

company size, IT is the percentage shareholdings of outside institutional investors, L is the leverage, RND is the research and development expenditure, and ADV is the advertising expenditure.

I test the marginal explanatory power of each of these variables in the regression by using the test command in Stata. The null hypothesis (H_0), $\beta_4 = 0$ cannot be rejected as the p-value is 0.8560 and $IT \cdot \frac{I_t}{M_{t-1}}$ should be excluded from the regression. The null hypothesis (H_0), $\beta_5 = 0$ cannot be rejected as the p-value is 0.8664 and $L \cdot \frac{I_t}{M_{t-1}}$ must not be used. Likewise the null hypothesis (H_0), $\beta_6 = 0$ cannot be rejected as the p-value is 0.999 and $RND \cdot \frac{I_t}{M_{t-1}}$ should not be used. Similarly, the null hypothesis (H_0), $\beta_7 = 0$ cannot be rejected as the p-value is 0.116 and $ADV \cdot \frac{I_t}{M_{t-1}}$ should not be used (the definitions, summary statistics and correlation coefficients of the extra (insignificant) variables are not reported to save space).

The results of Panel 8 are given in table XV (the standard errors are reported in parentheses).

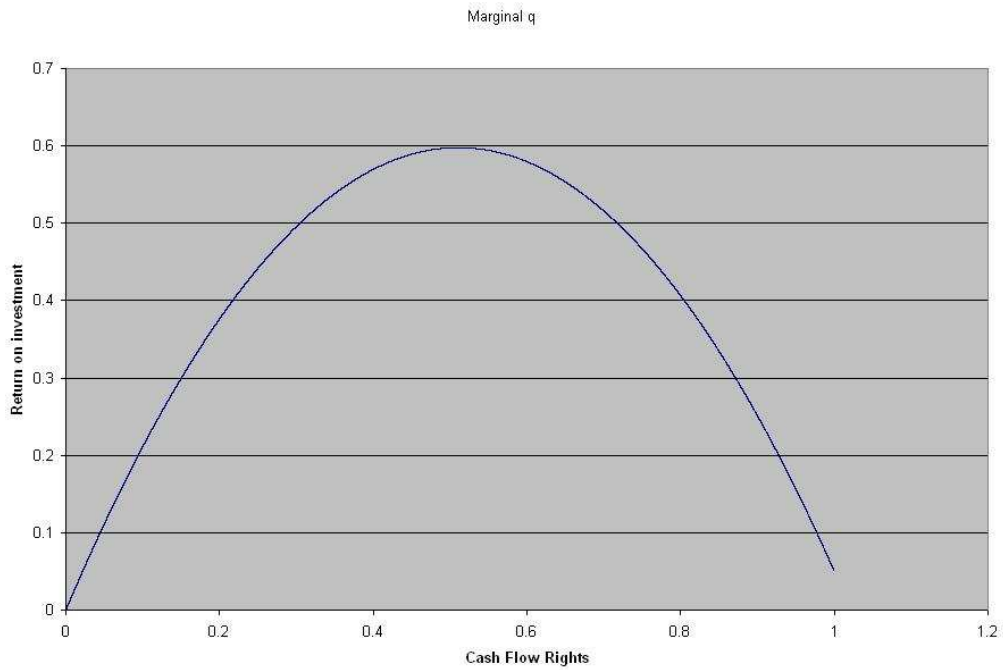


Figure 6. The relationship between return on investment and cash flow rights of ultimate owners

The graph of the return on investment function has been prepared from the results of the quantile regression by using the average values of the explanatory variables. This graph is illustrated in figure 6.

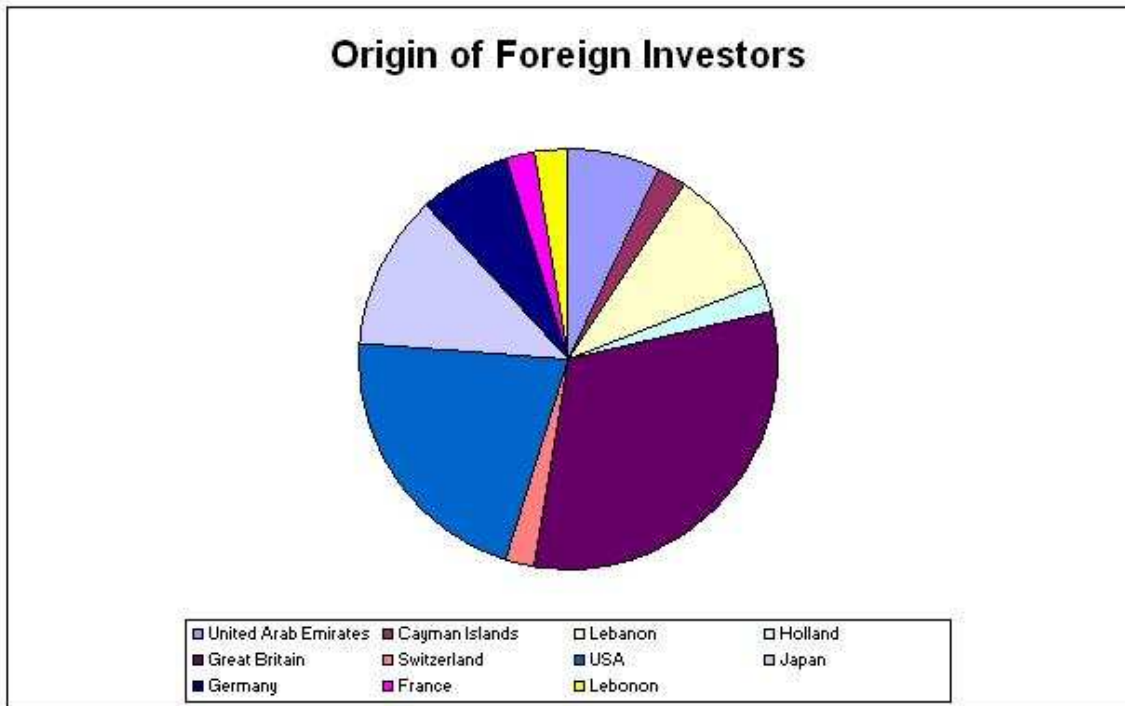


Figure 7. Origin of foreign investors

None of the foreign investors have state as the ultimate owner. The country of origin of foreign owners is illustrated in figure 7.

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REFERENCES

1. Almeida, H. and Wolfenzon, D., 2006 A Theory of Pyramidal Ownership and Family Business Groups. *Journal of Finance*; **61**:2637–2680.
2. Ang, James S., and David K. Ding, 2006 Government ownership and the performance of government-linked companies: The case of Singapore. *Journal of Multinational Financial Management* ; **16**:64–88.
3. Berle, A. A. and Means, G. C. *The Modern Corporation and Private Property*. New York New York, NY: Harcourt, Brace and World.
4. Chen, Zhilan, Yan-Leung Cheung, Aris Stouraitis, and Anita W.S. Wong, 2005. Ownership concentration, firm performance, and dividend policy in Hong Kong. *Pacific Basin Finance Journal* ; **13**:431–449.
5. Ceuto D.C., S., 2008. *Corporate Governance and Ownership Structure in Emerging Markets: Evidence from Latin America* . <http://ssrn.com/abstract=1157031>, 2008.
6. Gugler K., Mueller D.C., and Yurtoglu B.B., 2003. The Impact of Corporate Governance on Investment Returns in Developed and Developing Countries. *Economic Journal* ; **113**:511–539:
7. Gugler K., Mueller D.C., and Yurtoglu B.B., 2004. Corporate Governance and Globalization. *Oxford Review of Economic Policy*; **20**:129-156.
8. Hussain, I. *Economic Management in Pakistan 1999-2002* Oxford University Press.
9. Jensen, M. C. and Meckling, W., 1976. Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics*; **3**:305-360:
10. Joh, S.W., 2003. Corporate Governance and Firm Profitability: Evidence from Korea Before the Economic Crisis. *Journal of Financial Economics*; **68**:287–322:
11. Kumar, Jayesh, 2008. Does Ownership Structure Influence Firm Value? Evidence from India. *Indira Gandhi Institute of Development Research*,; **11**-28:
12. La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R., 1997. The Legal Determinants of External Finance. *The Journal of Finance*; **52**:1131–1150:
13. La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R., 1998. Law and Finance. *Journal of Political Economy*; **106**:1113-1155:
14. Lemmon, Michael L., Lins, K.V. , 2003. Ownership Structure, Corporate Governance, and Firm Value: Evidence from the East Asian Financial Crisis. *The Journal of Finance*; **58**:1445-1468:
15. Liu G. S., Sun P., 2003. Identifying Ultimate Controlling Shareholders in Chinese Public Corporations: An Empirical Survey. *Asia Programme Working Paper*; **1**:
16. Mak, Y.T., and Yuanto Kusnadi, 2005. Size really matters: Further evidence on the negative relationship between Board Size and Firm Value. *Pacific Basin Finance Journal*; **13**:301–318:
17. Martinez J.I., Stohr B.S., Quiroga B.F., 2007. Family Ownership and Firm Performance: Evidence from Public Companies in Chile. *Family Business Review*; **20**:83–94:
18. McConnell, J. J. and Servaes, H., 1990. Additional Evidence on Equity Ownership and Corporate Value. *Journal of Financial Economics*; **27**:595–612:
19. Morck, R., Shleifer, A. and Vishny, R., 1988. Management Ownership and Market Valuation: An Empirical Analysis. *Journal of Financial Economics*; **20**:293-315:
20. Mueller, D. C., and Reardon E., 1993. Rates of Return on Corporate Investment. *Southern Economic Journal*; **60**:430-453:
21. Pant, Manoj and Pattanayak, Manoranjan, 2007. Insider Ownership and Firm value: Evidence from Indian Corporate Sector. *Munich Personal RePEc Archive*; **MPRA**6335:
22. Sarkar, Jayati and Sarkar, Subrata., 2000. Large Shareholder Activism in Corporate Governance in Developing Countries: Evidence from India. *International Review of Finance*; **11**:61-194:
23. Short, H. and Keasay, K., 1999. Managerial Ownership and the Performance of Firms: Evidence from the UK. *Journal of Corporate Finance*; **5**:79-101:
24. Sun Q., Tong J., Tong W.H.S., 2002. How does Government Ownership affect Firm Performance? Evidence from China's Privatization Experience. *Journal of Business Finance and Accounting*; **29**:1–27:
25. Stulz, R., 1988. Managerial Discretion and Optimal Financing Policies. *Journal of Financial Economics*; **26**:3-27:
26. Wiwattanakantang Yupana, 2001. Controlling Shareholders and Corporate Value: Evidence from Thailand. *Pacific Basin Finance Journal*; **9**:323-362:

27. Xu, Xiaonian, and Wang, Yan, 1999. Ownership Structure and Corporate Governance in Chinese Stock Companies. *China Economic Review*; **10**:75-98:
28. Yeh, Y. H., Lee T.S., and Woidtke, T., 2001. Family Control and Corporate Governance: Evidence from Taiwan. *International Review of Finance*; **2**:21-48:

ABSTRACT

Ein wichtiger Beitrag zur Literatur wird insofern gemacht, als dass die alignment (Anpassungs-) und entrenchment (Abwehr-) Effekte aufgrund der Eigentümerstruktur auf die Rendite von Investitionsentscheidungen untersucht werden. Dafür wird die Theorie des Grenznutzens einer Investition (marginal q) in Bezug auf die Leistung pakistanischer Unternehmen verwendet. Unternehmen in Familienbesitz erzielen eine Rendite ihrer Investitionen von 88 percent der Kosten ihres Kapitals, was auf das Vorhandensein von agency costs in ihrer governance (Führungs-) Struktur schließen lässt. Ein wichtiges Resultat ist, dass die Rendite der Investitionen von Unternehmen im Familienbesitz niedriger ist als jene von Unternehmen mit ausländischen Eigentümern. Bei in Staatsbesitz befindlichen Unternehmen beträgt die Rendite von Investitionen nur 65 percent ihrer Kapitalkosten, woraus geschlossen werden kann, dass sich Kontrolle durch den Staat negativ auf die Unternehmensführung auswirkt. Die Verwendung des marginal q für die Schätzung der Beziehung zwischen Eigentümerschaft und Performance garantiert, dass ein kausaler Zusammenhang in diese Richtung besteht. Statistische Tests der Effekte der Eigentümerstruktur auf die Unternehmensperformance zeigen, dass die Rechte der Eigentümer in Bezug auf den Cash flow eindeutig positiv, und jene in Bezug auf den quadrierten Cash Flows eindeutig negativ sind. Es zeigt sich eine starke Evidenz für das Vorhandensein von entrenchment, da der entrenchment-Effekt den alignment (Anreiz-)Effekt in 56.8 percent der Unternehmen dominiert. In Anbetracht von Pakistans schlechtem Rating bezüglich Vertragsvollzug (1.66), hat die starke Evidenz von agency-Problemen Auswirkungen auf den Schutz von fremden Eigentümern.

Curriculum Vitae

Education

(2007) Diploma Study of Economics (Masters of Economics)

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