Corporate governance and firm performance

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CORPORATE GOVERNANCE AND FIRM PERFORMANCE: AN ANALYSIS OF OWNERSHIP STRUCTURE, PROFIT REDISTRIBUTION AND DIVERSIFICATION STRATEGIES OF FIRMS IN INDIA

Corporate Governance and Firm Performance: An Analysis of Ownership Structure, Profit Redistribution and Diversification Strategies of Firms in India

Proefschrift

ter verkrijging van de graad van doctor aan
de Universiteit van Tilburg,
op gezag van de rector magnificus, prof. dr. F.A. van der Duyn Schouten,
in het openbaar te verdedigen ten overstaan van
een door het college voor promoties aangewezen commissie
in de aula van de Universiteit

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Rejie George Pallathitta

geboren op 5 februari 1972 te Ernakulam, Kerala, India

Promotor: Prof. Dr. S.W. Douma
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To my parents

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Cochin, India
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CHAPTER 1

INTRODUCTION

1.1 Introduction

> "*The governance of the corporation is now as important to the world economy as the government of countries*"[1]
>
> *James D. Wolfensohn*
> *President, World Bank*

Corporate governance has been defined variously by a number of scholars. The variation in these definitions stems primarily due to differences in perspectives regarding the ambit of corporate governance. At one end of the spectrum lies the Shleifer and Vishny (1997) definition which states that

"corporate governance deals with ways in which suppliers of finance to corporations assure themselves of getting a return on their investment."

At the other end, Cadbury (2003) has a far broader perspective on the subject. He states

"…corporate governance is concerned with holding the balance between economic and social goals and between individual and communal goals. The governance framework is there to encourage the efficient use of resources and equally to require accountability for the stewardship of those resources. The aim is to align as nearly as possible the interests of individuals, of corporations and of society."

This thesis examines aspects of ownership structure, business group-affiliation, resource transfers among group-affiliated firms and diversification strategies pertaining to the relationship between corporate governance and firm performance among firms in India. The issues are examined from a 'shareholder' rather than the 'stakeholder' perspective. Furthermore, a positivist tenor is maintained throughout, with normative implications of the findings alluded to only occasionally. This choice does not constitute a judgment favoring one perspective over the other and is not meant to discount the

[1] Annual review, Global Corporate Governance Forum (2003).

importance of policy related issues concerning the field of corporate governance and the wider impact of governance issues on the economy and society at large, but is dictated by the necessity to keep the domain of the study manageable. The ambit of the study is therefore more closely aligned with Shleifer and Vishny (1997) and to the Cadbury (1992) conceptualization of the field of corporate governance.[2]

1.2 Outline of the thesis

The dissertation consists of a background essay (*chapter 2*), three empirical papers (*chapters 3, 4 and 5*) and conclusions (*chapter 6*). *Chapter 2* has two parts. The first part attempts to survey the field of corporate governance with an emphasis on the influence of various internal and external corporate governance mechanisms. Among these various governance mechanisms, ownership structure and business group affiliation represent the two themes that permeate throughout the thesis and they are therefore discussed at length. The second part deals briefly with the relevant issues pertaining to the institutional context in India, as a common thread linking all three papers in the dissertation is that they concern firms from India. The prevailing institutional environment has a direct bearing on many of the governance devices and is crucial for a better understanding of the evolution of corporate governance structures in India.

Having set the stage for examining corporate governance issues in India, we move on to core of the thesis. The focus of the dissertation is on the impact of firm specific characteristics such as ownership structure and business group affiliation on the performance, cross-subsidization and diversification strategies of corporates in India. The monitoring roles of different groups of shareholders and their interrelationships are probed with the larger objective of seeking a better understanding of the contributory effects of corporate governance in the performance of firms in emerging economies like India. To bring this to fruition, three essays investigate ownership structure, profit redistribution and diversification issues using a large sample of firms from India. These essays take the form of three chapters. Some overlap between these chapters exists owing to the fact that these essays are self-contained and constitute independent papers. A brief description of the content of these essays and the concluding chapter follows.

Chapter 3 provides an in-depth investigation of the influence of the firms'

[2] "Corporate governance is the system by which companies are directed and controlled", Committee on the financial aspects of corporate governance in the United Kingdom, Cadbury (1992).

ownership structure on firm performance. Specifically, the influence of owner heterogeneity is explored by adopting a multi-theoretic approach. The adoption of such an approach facilitates a holistic and richer understanding of the observed differential impact of various shareholders on firm performance among emerging market firms such as those in India. Prior studies have not made a distinction between foreign financial institutions and foreign industrial corporations. The aggregation of these investors into a common class of shareholders results in crucial differences in their abilities, incentives and consequent differential influences on performance remaining unmasked. By employing an approach embedded in the elements of the property rights dimension, the resource based view and drawing on pertinent institutional factors, a more holistic explanation of the differential impact of foreign institutional and foreign corporate shareholders on firm performance is obtained.

We find that the previously documented positive effect of foreign ownership on firm performance is found to be substantially attributable to foreign corporations that have, on average, a larger shareholding, higher commitment and longer-term involvement. Moreover, the essay also documents that the importance of owner identity and their differential effects extend to domestic shareholdings as well. We find a positive influence of domestic corporate shareholdings *vis à vis* domestic financial institutions. These results are consistent with our theoretical postulates utilizing the multi-theoretic approach concerning the impact of these various categories of shareholdings.

Chapter 4 investigates business groups in greater detail. Business groups are a commonly used organizational form in many countries and play a dominant role in many developed as well as emerging economies. Three aspects pertaining to business groups are explored in this chapter. First, the effect of business group-affiliation on the performance of firms in comparison to free standing or independent firms is examined. Second, a unique feature of a business group is their ability to exploit the groups' internal resources by transferring them across firms affiliated to a group. In this chapter, we focus on the business group's internal capital market and examine the profit redistribution (or cross-subsidization) phenomenon among firms affiliated to business groups. We document the existence of profit redistribution among group-affiliated firms and analyze aspects of ownership structure and group-affiliation which enhance the effect of profit redistribution. Third, we explore whether the phenomenon of profit redistribution is efficient. As many of these business groups are family controlled, a substantial cause behind some of the redistribution could be due to solidarity among the family members managing these firms. A key question therefore is whether this

solidarity among the family members managing different firms in the group interferes in sound economic decision making and results in a sub-optimal allocation of resources. Finally, as the efficiency of the resource allocation impinges on the performance of these group-affiliated firms, we seek to determine if profit redistribution facilitates or impedes improvements in the performance of firms affiliated to business groups. The study therefore attempts to contribute to the literature examining the reasons behind the differential effect on the performance of firms affiliated to these business groups and if they create added value *vis à vis* unaffiliated firms.

Our results consistently show that firms affiliated to business groups under perform independent or freestanding firms. We find that firms affiliated to business groups are characterized by profit redistribution and that the effect of profit redistribution is conditioned by the degree of inside ownership and the size of the business group. Higher levels of inside ownership and business group size are shown to enhance the effect of profit redistribution. Furthermore, we examine the capital expenditures of high performing and low performing group-affiliated and independent firms. We find that deserving or higher performing group firms are not receiving their due share of resources whereas lower performing group firms appear to be subsidized at the cost of higher performing firms. This reveals significant inefficiencies in the allocation of resources among group-affiliated firms. The implications of this finding are two fold. First, it questions the purported efficiency of the internal capital market among business groups *vis à vis* the external capital market. Second, it shows that profit redistribution among group-affiliated firms is inefficient and leads to the probability that this inefficiency in profit redistribution causes group-affiliated firms to perform poorly relative to independent firms. This underperformance persists even after controlling for other possible explanations for the underperformance, such as diversification and resource transfers to unlisted firms. The results of the study therefore lend support for the inefficient profit redistribution explanation of the ‘business group discount’.

Chapter 5 investigates the relationship between firm diversification and performance. The relationship between a firm’s diversification strategy and its performance remains an active and contentious subject in both finance and strategy domains. This is owing to the differing theoretical postulates and empirical findings which depict that firm diversification can have beneficial as well as harmful effects on firm performance. While, no attempt has been made to offer an alternative perspective or bridge the existing divide, we cast our attention instead in this chapter to an often neglected issue of direct concern as far the relationship between firm diversification and

firm performance is concerned. This relates to the contributory effects of aspects pertaining to the firm's organizational characteristics (such as business group-affiliation) and ownership structure in influencing the diversification-performance relationship. This chapter therefore represents an exploratory attempt to contribute to the extant literature examining the influence of firm diversification and performance by factoring in firm specific organizational and ownership characteristics in order to obtain a fuller understanding of the effect of firm diversification strategies on performance.

Our findings consistently indicate that, broadly, higher levels of firm diversification influence firm performance negatively among firms in India. This result is robust to alternative performance and diversification measures. The result lends strong support to those studies documenting a 'diversification discount'. However, a closer examination of the diversification-performance relationship among group-affiliated firms and incorporating certain organizational and ownership characteristics reveals a considerably less clear cut impact. The inclusion of these firm specific organizational characteristics such as group-affiliation and ownership structure in our analysis unearths several hidden attributes underpinning the diversification-performance relationship. First, diversification strategies of firms affiliated to business groups have an insignificant impact on firm performance, whereas for their independent counterparts, diversification significantly lowers firm performance. This occurs despite group-affiliated firms being significantly more diversified than independent firms. Second, probing further, the impact of firm diversification on performance is not homogeneous across groups. There is evidence that for firms affiliated to smaller business groups, firm diversification significantly lowers firm performance. In contrast, there is some evidence albeit much weaker that for firms affiliated to moderately sized business groups firm diversification enhances firm performance. Third, higher corporate and managerial ownership levels substantially mitigate the negative influence on firm performance of firm diversification strategies. Overall, the results point to the importance of factoring in the firms' organizational characteristics and ownership structure in investigating the influence of diversification on firm performance.

Finally, *Chapter 6* represents an effort to glean on the various results and provide an overall perspective by integrating the findings and to tease out the key import of the study. Some limitations and suggestions for further research are also highlighted.

CHAPTER 2

CORPORATE GOVERNANCE MECHANISMS, BUSINESS GROUPS AND THE INDIAN INSTITUTIONAL BACKGROUND

2.1 Governance mechanisms

Governance mechanisms are tools that principals employ to align incentives between principals and agents and to monitor and control agents. These mechanisms are therefore utilized to ensure that the agents act in a manner that is in the best interests of their principals (Hill and Jones, 2004:386). A firm is typically governed by a mix of internal and external governance mechanisms. Depending on the institutional context, the relative importance and influence of these mechanisms differ. Anglo-Saxon economies in particular are characterized by strong external governance mechanisms whereas the Rhineland and Japanese governance mechanisms exude a greater reliance on internal control devices.[3]

These internal and external governance mechanisms are elaborated further in the next section. This is followed by a detailed examination of ownership structure in *Section 2.2* which a represents a key governance device and a core concern throughout the dissertation. *Section 2.3* introduces business groups. The organizational characteristics of business groups have important implications for the governance of firms in many countries around the world and have a direct bearing on the investigation of many of the governance issues dwelt with in the later chapters of the thesis. *Section 2.4* discusses ownership characteristics and business groups with particular reference to India which represents the geographical setting of the study. *Section 2.5* provides a brief sketch of the pertinent institutional context in India and *Section 2.6* concludes. The various sections in this chapter attempt to provide the requisite conceptual and institutional background for all the subsequent chapters in this dissertation.

2.1.1 Internal governance

Internal governance mechanisms are usually sub-categorized into those involving the use of board of directors, large shareholders, debt holders and executive

[3] In the discussion which follows the legal and regulatory framework and the influence of product market competition are subsumed under external governance mechanisms although some researchers treat them separately.

compensation schemes. These mechanisms are touched upon only briefly in the exposition that follows, the sole exception being the role of shareholders which is elaborated on at length in this chapter and elsewhere in the thesis as it represents one of key governance mechanisms of interest in this study.

2.1.1.1 Board of directors

The board of directors acts as a fulcrum between the owners and controllers of a corporation and is a crucial a link between the shareholders who are providers of capital, and the managers who are the individuals who use that capital to create value (Monks and Minow, 2001:81). They are elected by the shareholders of the firm and have a fiduciary role in relation to fulfilling their responsibilities towards the shareholders they represent. Their duties and responsibilities involve hiring, firing, compensating employees and advising top management (Denis, 2001). The board is also responsible for making sure that the audited financial statements of the company represent a true and fair picture of the firm's financial position (Hill and Jones, 2004:386).[4] Boards can consist of a mix of inside and outside directors. Inside directors are those that are linked with the controlling shareholders and are those that hold senior positions in the firm. They are also referred to as executive directors.[5] These directors are represented on the board because they possess intimate knowledge about company activities without which the board cannot perform its monitoring role. On the other hand, outside directors are not employees of the firm. They owe their position on the board due the specific expertise which they possess in areas that are valuable to firm. They usually represent industry, legal, accounting, management and academic experts among others. These professional directors are also refereed to as non-executive or independent directors.[6]

While in theory the board serves as ideal device to cater to the monitoring needs of numerous atomistic shareholders, in practice as argued by Monks and Minow (2001:188), it is debatable if the average board has the sufficient incentives and is

[4] For a detailed exposition duties of board and for its relationship to the management process (see Monks and Minow, 2001: 168-171, 208)

[5] It is of course possible to have non-executive inside directors. In many family owned companies, some family members are not employees of the firm but they are insiders owing to their relationship with controlling family members.

[6] Both inside and outside directors on the board of firms can also assume directorial responsibilities in other firms, a phenomenon resulting in director interlocks which is discussed in detail later on in this chapter.

equipped with adequate abilities to perform the task owing to a number of reasons. Firstly, managements often stack the board with individuals sympathetic to their interests. Even directors who are ostensibly supposed to be independent are not genuinely so as there are loopholes in the requirements of many corporate governance codes. Secondly, there are significant demands on the director's time. Some estimates point to, as much as 100 hours annually for directorship in order to perform a satisfactory job. Since, most board members have full time positions in other organizations and often serve on multiple boards it is implausible that they would devote the necessary time and effort required for the purpose. Thirdly, the retainers paid to these directors are often only a tiny portion of their net worth. This raises concerns about the incentives these directors possess in evaluating and overseeing management despite concerns about reputation and personal pride.

2.1.1.2 Large shareholders

Large shareholdings mitigate the free-riding problems associated with innumerable atomistic shareholders as they are better able to internalize the costs associated with monitoring management. These shareholders are thus able to address the agency problem in that they have a general interest in profit maximization and enough control over the assets of the firm to have their interests' respected (Shleifer and Vishny, 1986). These large shareholdings can be 'managerial' or held by outsiders. Large managerial shareholdings result in mitigating the problems arising out of the separation between ownership and control due to greater alignment of interests and reduced on the job consumption (Jensen and Meckling, 1976).[7] However, a down side associated with a high level of owner-manager holdings is the possibility of entrenchment effects setting in (Stulz, 1988; Barberis, Boycko, Shleifer and Tsukanova, 1996) and reduced risk taking (Dharwadkar, George and Brandes, 2000) at high levels of ownership particularly in emerging economy contexts.[8] For firms devoid of large managerial holdings, large outside blockholders can be effective in monitoring and disciplining management, thereby alleviating problems associated with the typical Berle and Means corporation. These blockholders can be individuals, corporations and institutional holdings and their identity could have a significant bearing on their influence. For instance, the monitoring abilities of these block holders is significantly enhanced if they

[7] Problems pertaining to the separation of ownership and control have a long history and date back to Smith (1776) and Berle and Means (1932).

[8] US studies also report instances of managerial entrenchment (see McConnell and Servaes, 1990). Further evidence is provided in Murphy (1999) and Core, Guay and Larker (2001).

are in the same industry and share product related expertise (Allen and Phillips, 2000).[9] Empirical evidence on the abilities of these large shareholders to enhance firm governance exists particularly from Germany and Japan. Franks and Meyer (1994) show that large shareholders are associated with managerial turnover in Germany and similar results are depicted by Kaplan and Minton (1994) and Kang and Shivdasani (1995) for Japanese firms.[10] Blockholders are characterized by an interesting duality, as Denis (2001) state '..blockholders seek both to increase firm value (shared benefits of control) and to enjoy benefits that are not available to other shareholders (private benefits of control).' Problems however, arise when these private benefits accrue at the expense of other shareholders. The influence of these large blockholdings can then be destructive, particularly if they enable the controlling owner to form pyramidal and cross-holding structures that enhance control and expropriation possibilities.[11] These problems can be particularly severe in emerging economies owing to the poor regulatory and legal framework and ineffective enforcement of laws in these countries. Evidence in support of these conjectures has been provided recently by Lins (2003) who examines effects of blockholdings among a broader set of countries. His study examining management and non-management blockholdings among firms in 18 emerging markets finds that when there exists a greater divergence in the cash flow and control rights among the management group blockholdings, firm values are lower. In contrast, large non-management blockholdings are positively related to firm value. Furthermore, Lins (2003) also reports that these effects are more pronounced in countries with low shareholder protection.

2.1.1.3 Debt holders

Large creditors or debt holders can assume the role of active monitors. They have large investments in the firms' to whom they lend funds and in common with equity owners, debt holders too require adequate returns on their investments. As Shleifer and Vishny (1997) state, their influence is on account of three reasons: Firstly, when a firm defaults or violates debt covenants, the debt holders receive a variety of control rights. Secondly, owing to the fact that certain debt holders typically lend short term, firms have to approach these lenders at short intervals for more funds. Thirdly, the need to make on going cash payments provides the firm management with more incentives to

[9] The specifics related to blockholding identity and their influence is examined at length later in the chapter.

[10] See also Holderness (2003) for a survey on blockholders and the effects on corporate control.

[11] Pyramidal and cross-holding structures are discussed in greater detail later in this chapter.

operate efficiently to generate even more cash flow (Denis, 2001).[12] This ultimately leads to a reduction in the agency costs of free cash flow.[13] In several countries financial intermediaries such as banks are intertwined with business group structures (the typical example being the Japanese *Keiretsu*). This results in an added dimension in examining the influence of these debt holders on firm governance. This phenomenon is often referred to as relationship banking. Relationship banking can have beneficial as well as harmful effects. The beneficial effects include the reduction in information asymmetries *vis à vis* arms-length lending, while the harmful effects accrue on account of misallocation of capital and the failure to relieve borrowers' credit constraints due to lenders' rent extraction (Claessens and Fan, 2003). Ferri, Kang and Kim (2001) find positive effects of relationship banking among a sample of Korean small and medium enterprises owing to their heavy reliance on external funds. On the other hand, Bae, Kang and Lim (2002) find a negative effect for the practice of relationship banking for both Korean banks and their client firms. La Porta, Lopez-de Silanes and Zamarripa (2003) consider a similar phenomenon i.e. related lending, wherein banks are controlled by persons or entities owning substantial interests in non-financial firms who in turn are receipts of significant amounts of loans from the banks which they control. Such structures are common in a large number of emerging economies. Akin to relationship banking, related lending results in similar benefits and costs. However, business group structures, wherein groups exercise controls over banks is more prone to problems associated the diversion of resources from depositors and/or minority shareholders to controlling owners. Such diversion takes the form of looting.[14]

2.1.1.4 Executive compensation schemes

Executive compensation focus on two principal concerns: the level of executive pay and the sensitivity of pay to performance (Denis, 2001). Compensation is determined by

[12] For a formal model on monitoring by financial intermediaries such as banks, see Diamond (1984). Early investigations into bank governance include Kaplan and Minton (1994), Kang and Shivdasani (1995) for Japan, Gorton and Schmid (2000) for Germany and Gilson (1990) and De Long (1991) for the United States.

[13] Jensen (1986,1993), Stulz (1990), Hart and Moore (1995) and Zweibel (1996) represent studies that suggest that debt servicing obligations help to discourage over investment of free cash flow by self-serving managers (Harvey, Lins and Roper, 2004).

[14] La Porta, Lopez-de Silanes and Zamarripa (2003) state that "Looting can take several forms. If the banking system is protected by deposit insurance, the controllers of a bank can take excessive risk or make loans to their own companies on non-market terms, fully recognizing that the government bears the costs of such diversion. Even without deposit insurance, the controllers of a bank have a strong incentive to divert funds to companies they control, as long as their share of profits in their own companies is greater than their share of profits in the bank." See the same study for an investigation of related lending practices in Mexico and for a listing of countries characterized by this phenomenon.

the base salary, bonuses, stock options and long-term incentive plans.[15] The sensitivity of executive compensation to firm performance arises through managerial ownership and particularly the use of stock options. Higher levels of managerial ownership and attractive stock options can act as powerful devices to bond managerial interests to those of the minority shareholders.[16] Stock options are contracts that give recipients the right to buy a portion of the stock at a pre-specified 'exercise' or 'strike' price for a pre-specified term (Murphy, 1999). Since stock options provide a direct link between managerial rewards and share-price appreciation they are a powerful mechanism to provide managers with incentives to perform. One of their principal advantages lies in the fact that unlike direct stock ownership wherein the manager tends to be become more risk averse with increases in his/her ownership of the firm, the value of options increases with the volatility of stock prices resulting in the executives with stock options having incentives to engage in risky investments. In other words, stock options add convexity to managers' payoff functions (Denis, 2001).[17] Additional advantages accrue on account of the fact that they offer an attractive way to defer taxable income and are largely invisible from corporate accounting statements (Murphy, 1999). Currently no theoretical or empirical consensus exists with regard to the impact of these equity incentives on performance (Core, Guay and Larcker, 2002). Murphy (1999) also concludes "..that there is little direct evidence on the returns a company can expect from introducing aggressive performance based compensation plans." Most of these studies relate to the United States.[18] Barkema and Gomez-Mejia (1998) report that almost all empirical studies on CEO compensation have utilized U.S. data and have typically focused on U.S. contexts. International evidence is just beginning to accumulate.[19]

[15] See Murphy (1999) and Core, Guay and Larcker (2002) for indepth discussions on the level and structure of executive compensation.

[16] As aspects pertaining to managerial ownership have been discussed earlier, this section focuses on stock options.

[17] See also Core, Guay and Larcker (2002) for an elaboration of the convexity argument.

[18] Studies include Morck, Shleifer and Vishny (1988), McConnell and Servaes (1990), Frye (2001), Sesil, Kroumova, Kruse and Blasi (2000) and Ittner, Lambert, Larcker (2001) among others. See Core *et al.* (2002) for a complete discussion of these and many other studies. See also Murphy (1999) for a broader coverage of compensation studies.

[19] See Kaplan (1994) for compensation comparisons between United States and Japan, Abowd and Bognanno (1995) for OECD countries, Kato (1997) among corporate groups in Japan, Conyon and Murphy (2000) on United States and United Kingdom, Duffhues, Kabir, Mertens and Roosenboom (2002) for the Netherlands, Crespí, Gispert, and Renneboog (2002) in Spain and Bryan, Nash and Patel (2002) for extensive study covering 43 countries on compensation mixes. For a detailed list of international studies, see Murphy (1999). See also Barkema and Gomez-Mejia (1998) for more studies in a non-US setting.

However, in most of the non-Anglo Saxon world, ownership is not dispersed and the principal agency problem stems more from expropriation of entrenched insiders rather than agency problems associated with managerial incentives.

2.1.2 External governance

External governance mechanisms can be further sub-categorized into those involving the use of takeovers and the influence of the regulatory environment. These are briefly enumerated below:

2.1.2.1 Takeovers

Prior to the 1980s, corporate governance structures were designed in manner that shareholder concerns were rarely at the top of the managerial agenda. Hardly any attention was paid to shareholder interests and management was loyal to the corporation rather than the shareholder (Holmstrom and Kaplan, 2001). However, the 80s and 90s in the United States were characterized by problems related to use of free-cash flow and the poor performance of conglomerate firms. Takeovers were seen as mechanism to rectify this malaise. By acquiring control of the firm by purchasing its common stock, an acquirer can improve the operations of the firm and realize a profit on the increased value of the acquired shares (Denis, 2001). There exists a considerable amount of evidence that takeovers mitigate governance problems and that they typically increase the combined value of the target and acquiring firm.[20] International evidence on the use of takeovers as a governance mechanism is gathering pace.[21] However as Shleifer and Vishny (1997) note takeovers are not without their limitations. Firstly, they can be prohibitively expensive and time consuming to undertake. Consequently, large deviations between the present value and the potential value are required for bidders to have sufficient incentives to mount a takeover. They require access to vast financial resources or 'deep-pockets' to mount. For instance, the invention of 'Junk Bonds' had a considerable role to play in the heightened takeover activity witnessed in the United States in the late 80s. Secondly, instead of curbing agency costs they can foster these when bidding managements overpay for acquisitions that result in access to private benefits of control. In support of this conjecture a recent Korean study by Bae, Kang and Kim (2002) found that acquisitions by Korean *Chaebols* are used as a conduit by controlling shareholders to increase their own wealth at the expense of minority shareholders. Thirdly, incumbent managers often resort to lobbying activities to

[20] See Manne (1965), Jensen (1988) and Scharfstein (1988) for pioneering contributions.

[21] See Franks and Mayer (1996) and Short and Keasey (1999) for the UK

promulgate anti-takeover legislations.[22] In fact, the political opposition to takeovers in most parts of the globe has resulted in takeovers being a viable governance device only in the Anglo-Saxon world until recently. Finally, faced with the prospect of losing their jobs, managers often employ a vast array of takeover defenses to prevent takeovers from succeeding. These takeover defenses can be structural or technical in character. Structural defenses arise from stock market and equity ownership structures, while technical defenses involve devices to impede hostile takeover attempts (Kabir, Cantrijn and Jeunink, 1997).[23] Some of the popularly used defenses in the US involve the use of greenmail, poison pills, and white knights.[24]

2.1.2.2 Legal and regulatory mechanisms

The legislative environment prevailing in an economy can be a significant determinant of the manner in which firms are governed and the effectiveness with which minority shareholders and other stakeholders are protected. In a series of influential articles, La Porta, Lopez-de-Silanes, Shleifer and Vishny (LLSV) have documented significant differences in the levels of investor protection, ownership concentration, dividend policies, creditor rights and enforcement abilities.[25] The general import of these studies are the following: common law counties afford better protection to minority shareholders and have firms which are valued more *vis à vis* other legal systems, creditor rights are best protected among common law countries, enforcement is best among Scandinavian legal origin countries, and ownership concentration is highest among French-civil-law countries.[26] Moreover, the level of ownership concentration is

[22] For instance, Denis (2001) reports that "…as of mid-1998, 41 of the 50 US states had in place various types of anti-takeover statutes, all of which explicitly increase management's power when under threat of an unwanted takeover-a situation in which the degree of conflict of interest between managers and shareholders is arguably at its greatest."

[23] The use of these defenses varies according to the prevailing institutional contexts and corporate governance system. See Kabir *et al*. (1997) for an elaboration of these takeover measures and for the use of take over defenses in the Netherlands.

[24] For discussion of these defences (see Monk and Minow, 2001: 199-203).

[25] These papers are the following: 'Legal determinants of external finance' La Porta, Lopez-de-Silanes, Shleifer, Vishny (1997), 'Law and Finance', La Porta *et al*. (1998) 'Corporate ownership around the world', La Porta *et al.* (1999), 'Investor protection and corporate governance', La Porta *et al.* (2000) and, 'Investor protection and corporate valuation', La Porta *et al.* (2002).

[26] Legal systems around the world can be broadly categorized into Common law and Civil Law based on their origin. Common law countries are those that have laws modeled on English law. Common law or English law is formed by judges who resolve specific disputes. Precedents from judicial decisions as opposed to contribution by scholars determine common law. Countries categorized under common law represent primarily those counties who share a common British heritage. These include: Australia, Canada, Hong Kong, India, Ireland, Israel, Kenya, Malaysia, New Zealand, Nigeria, Pakistan, Singapore,

negatively related to the degree of investor protection. Another related study by Johnson, Boone, Breach and Friedman (2000) examines the influence of enforceability of contacts, shareholder rights and protection, creditor rights, accounting standards and broad macro-economic measures on exchange rates and stock market performance. Their results indicate that measures pertaining to the protection of minority shareholder rights explain to a greater extent exchange rate depreciation and stock market declines during the East Asian crisis during 1997-1998 than standard macro-economic measures. In a similar vein, Mitton (2002) finds that firms that offer higher disclosure quality, greater transparency, favorable ownership structure and more focused organization appear to provide more protection to minority shareholders during the East Asian financial crisis.[27] The results are therefore indicative of the fact that legal and regulatory mechanisms are a fundamental determinant in the evolution of corporate governance structures.

In addition to governance mechanisms elaborated above, product market competition, external auditors, adoption of governance codes and cross-listings in the exchanges play a role in improving and signaling adherence to superior corporate governance practices.[28]

South Africa, Sri Lanka, Thailand, United Kingdom, United States and Zimbabwe. Civil Law or Romano-Germanic law originates in Roman law and uses statues and comprehensive codes as a primary means of ordering legal material. Furthermore as opposed to the Civil Law tradition, it relies heavily on legal scholars to ascertain and formulate its rules. Civil Law can be further sub-categorized into French, German and Scandinavian. Among these French and German legal traditions have more in common with each other than Scandinavian legal traditions. Countries falling under the ambit of French civil law tradition include: Argentina, Belgium, Brazil, Chile, Columbia, Ecuador, Egypt, France, Greece, Indonesia, Italy, Jordan, Mexico, Netherlands, Peru, Philippines, Portugal, Spain, Turkey, Uruguay, and Venezuela. Those under German origin include: Austria, Germany, Japan, South Korea, Switzerland, and Taiwan and finally those under Scandinavian origin include: Denmark, Finland, Norway and Sweden (This elaboration on legal systems borrows heavily from La Porta *et al*., 1988 and the study should be referred to for further details.)

[27] Several other studies have also used the regulatory framework to explore corporate governance issues. These include Demirgüç-Kunt and Maksimovic (2002), Himmelberg, Hubbard, and Love (2002), Gul and Qiu (2002), Durnev and Kim (2002), Chui, Titman and Wei (2002), Gianetti (2002), Brockman and Chung (2003), Dittmar, Mahrt-Smith, and Servaes (2003), Lemmon and Lins (2003), Fauver, Houston and Naranjo (2003), Klapper and Love (2004)

[28] See Denis (2001) and Claessens and Fan (2003) for discussion on some of these other governance mechanisms.

Some of the prominent governance codes include the Cadbury code, Blue Ribbon code, OECD code, Vienot code, Peters report among others.

For an exhaustive listing of various national codes visit the European Corporate Governance Institute's website http://www.ecgi.org/codes/all_codes.htm and the World Bank website http://www.worldbank.org/html/fpd/privatesector/cg/codes.htm. For an in-depth comparison of International Governance codes see Gregory (2004)

2.2 Ownership structure

Ownership structure can typically be examined along the following two dimensions: concentration and identity. Both of these have important implications for corporate governance.

2.2.1 Concentration

Ownership concentration differs considerably around the world. La Porta *et al.* (1998) document that corporate ownership around the world is far more concentrated than is the case in the United States and the United Kingdom. In other words, the classic Berle and Means corporation does not extend to the non-Anglo Saxon world. Several other studies lead by Edwards and Fischer (1994), Franks and Meyer (1994), Berglof and Perotti (1994), Barca and Becht (1997), and Gorton and Schmid (2000) reported similar results in continental Europe. Prowse (1992), Kang and Shivdasani (1995) represent studies focusing on Japan. The overall picture that emerges from these studies is that in many countries large shareholders are active in corporate governance, in stark contrast to the Berle and Means image of unaccountable managers (La Porta *et al.*, 1999).

2.2.1.1 Why does ownership concentration differ around the world?

There are currently three perspectives on the differences in ownership concentration around the world. The first of these explanations is the 'over-regulation' perspective. Black (1990) and Roe (1994) are the prominent proponents of the over-regulation thesis. Black (1990) contends that regulation makes it costly to hold blocks and leads to shareholder passivity in the United States. Roe (1994) argues that regulation prevents potentially important investors from holding blocks in the United States. Secondly, La Porta *et al.* (1997) present the investor protection perspective on ownership concentration differences. According to them, ownership concentration is a response to inadequate protection of investors. As investor protection differs across the world, this explains the differences in ownership concentration. According to this thesis, countries with superior investor protection have lower levels of ownership concentration and *vice-versa*. The third perspective towards explaining ownership concentration is advocated by Easterbrook and Fischel (1991). They argue that the Berle and Means corporation and the closely held firm are efficient solutions (as far as firm organization is concerned), but in different contexts. Easterbrook and Fischel (1991) believe that had

these not been efficient solutions, these organizations would not have grown and survived in their respective contexts.

2.2.1.2 Measurement of ownership concentration

Ownership concentration is usually measured by computing the combined cash flow rights of the largest or coalitions of large shareholders (for instance, top three or top five shareholders). La Porta *et al.* (1998) is an example of a study which measures cash flow rights of the top three shareholders across a sample of 45 countries. Globally, average ownership concentration using this definition was 46 percent. Even the United States and the United Kingdom which represent economies most in line with the Berle and Means conjecture were found to have average concentrations in the range of 20 percent. La Porta *et al.* (1998) also group these countries according to legal origin and find that French civil law countries possess the highest concentration of ownership at around 54 percent and, contrary to the widely held belief, German civil law countries have the lowest ownership concentration at 34 percent. English common law countries have an average ownership concentration of around 43 percent. However, this approach towards measuring ownership concentration is not without its problems. One of the biggest drawbacks is that ownership is measured only at the first level and not traced up to the ultimate owners through pyramidal structures. Furthermore, horizontal linkages between large shareholders are also not accounted for. Taking these into account could lead to differences in the measured ownership concentrations. An attempt at rectifying this was undertaken by La Porta *et al.* (1999). In that study, firms are categorized as widely held and those that are controlled by a large owner.[29]

2.2.1.3 Effects of ownership concentration: Alignment and entrenchment

Increasing levels of ownership concentration serve to align the interests of the controlling owners and outside shareholders thereby mitigating the agency problems that arise owing to the separation between ownership and control. Firstly, the separation of ownership and control leads to a "Strong Manager, Weak Owner" situation as described by Roe (1994). High levels of ownership dispersion result in atomistic investors having little desire to invest necessary resources owing to the free-rider problem and also lacking adequate abilities to do so. A certain level of ownership concentration results in block holdings of a size to emerge that enables these large

[29] Control is measured by combining a shareholder's direct (shares registered in the shareholder's name) and indirect (shares held by entities that the shareholder controls) voting rights in the firm. Firms are categorized as not widely held if there is no controlling owner. There is no controlling owner if the sum of a shareholder's direct and indirect voting rights does not exceed either 10 percent or 20 percent. If two or more shareholders meet the control criteria, the largest shareholder is assigned as the controlling owner.

shareholders to internalize the costs associated with monitoring the manager. Higher levels of managerial ownership therefore results in 'reduced on the job consumption' (Jensen and Meckling, 1976). Secondly, large block holdings often result in reduced information asymmetries about firm operations and more patient block holders. This frees management to invest in the long term and creates a more conducive environment for firm specific investments of human capital by the firm's managers (Bratton and McCahery, 2002). Thirdly, high levels of ownership by the controlling owner can signal credible commitment by the controlling owner of having no intentions to expropriate minority shareholders (Gomes, 2000). As Claessens and Fan (2003) explain, this is owing to the fact that extraction of more private benefits would result in discounted share prices which in the case of large controlling owners will be damaging to the wealth of the owner as well.

Higher ownership concentration is not without its detrimental effects though. While traditional agency problems arising out of the separation of ownership and control are mitigated with greater levels of ownership, new conflicts are created. These arise owing to the following: Firstly, once managerial holdings exceed a threshold level of control, entrenchment effects set in and these owner managers are consequently less subject to internal and external corporate governance disciplining mechanisms.[30] Secondly, large multiple block holdings transform the traditional principal – agent problem into one involving 'multiple principals' with differing goals. Dharwadkar, George and Brandes (2000) term these secondary agency problems as 'principal – principal goal incongruence'. This goal incongruence between 'multiple principals' could lead to expropriation of minority shareholders and other claim holders such as bond holders.[31]

A useful scheme to examine how the alignment effect and the entrenchment effects interact is to use a categorization devised by Villalonga and Amit (2004). According to their scheme, the classic owner-manager conflict between the manager and widely dispersed shareholders in the typical Berle and Means corporation results in the incentive alignment problem referred to as *Type I* agency problem. On the other hand, the agency problem arising out the entrenchment of a single large shareholder leading to

[30] See Morck, Shleifer and Vishny (1988) for a discussion of the managerial entrenchment problem.

[31] "For example, if the large investor is an equity holder, he may have an incentive to force the firm to take on too much risk, since he shares in the upside while the other investors, who might be creditors bear all the costs of failure (…) Alternatively, if the large investor is a creditor, he might cause the company to forego good investment projects because he bears some of the cost, while the benefits accrue to the shareholders." (Shleifer and Vishny, 1997)

conflicts between the large shareholder and minority shareholders is referred to as *Type II* agency problem. The interaction between these two varieties of agency problems results in four categories of firms which are characterized by the presence or absence of *Type I* or *Type II* agency problems. See *Figure 2.1* for a depiction of the resulting matrix.

Figure 2.1
The various combinations of Type I and II Agency problems faced by firms (adapted from Villalonga and Amit, 2004)

		Type I Agency problem Conflict of Interest between Owners and Managers	
		No	Yes
Type II Agency problem Conflict of Interest between Large and Minority Shareholders	Yes	*Type A Firm*	*Type B Firm*
	No	*Type C Firm*	*Type D Firm*

Type A: Firms with control enhancing mechanisms (dual-class equity, pyramids, cross-holdings, voting agreements) and an owner-manager. These firms might encounter *Type II* Agency problems but not *Type I* agency problems. Business groups firms typically face *Type II* agency problems

Type B: Firms with control enhancing mechanisms but no owner-manager. These firms might have both agency problems

Type C: Firms with an owner-manager but no control enhancing mechanisms. These firms do not have either agency problem

Type D: Firms without an owner-manager which may have *Type I* Agency problem but no *Type II* Agency problem.

2.2.2 Identity

The identity of shareholders has important implications for corporate governance as shareholders differ with regards to their objectives, the manner in which they exercise their power and this is reflected in company strategy with regard to profit goals, dividends, capital structure and growth rates (Thomsen and Pedersen, 2000). Prior research has devoted insufficient attention to this issue (Thomsen and Pedersen, 2000; Gugler, 2001; Bøhren and Ødegaard, 2003). Shareholder identity can be broadly sub-categorized into two dimensions. Firstly, they can be categorized as inside or outside.

Inside owners typically represent managerial holdings and blockholdings by controlling owners. Outside holdings are usually institutional holdings and/or blockholdings outside the sphere of influence of the controlling owner. Secondly, they can also be categorized by examining the nature of the relationship of these investors *vis à vis* the firms they invest in. Brickley, Lease and Simth (1988) employ such a categorizing scheme and classify owners as *pressure-sensitive*, *pressure-resistant* and *pressure-indeterminate*. Pressure-sensitive shareholders are those that are susceptible to the influence exerted by the firms' management. They have potentially extensive dealings with firms. On the other hand, pressure-resistant owners are investors with clear performance objectives and few if any non-investor dealings with the concerned firms. Pressure-intermediate investors do not have a clearly defined role. They could be passive or active depending on the circumstances.[32] Since owner identity is of critical importance to the issues investigated in this thesis we will elaborate on the various shareholder categories and make use of these dimensions in the discussion of the various shareholders that follows.

2.2.2.1 Family holdings

Family ownership represents a substantial portion of the equity stake in most countries and represent inside holdings. They constitute nearly 18 percent of the outstanding equity among S&P 500 firms in the US (Anderson and Reeb, 2003). Elsewhere in the world, Becht and Mayer (2001) report mean family holdings to the tune of 27 percent in Germany, 26 percent in Austria and 20 percent in Italy. Using a broader sample of 27 industrialized countries, La Porta *et al.* (1999) document that 30 percent of large publicly traded firms are family controlled.[33] Faccio and Lang (2002) find that 44 percent of firms in 13 European countries to be family controlled using the 20 percent controlling threshold. Claessens *et al.* (2000) document the strong presence of family holdings in Asia as well.[34] They find that in countries such as Indonesia, the

[32] See Brickley, Lease and Simth (1988), Ryan and Schneider (2002) and Ramaswamy, Li and Veliyath (2002) for details.

[33] Large sized firms are the 20 largest firms by stock market capitalization in respective countries. The proxy for 'control' is through a 20 percent equity cut off. Firms are categorized as family controlled if the sum of the direct and indirect holdings of the family exceeds 20 percent. Using a lower threshold of controlling ownership such as 10 percent, La Porta *et al.* (1999) find that the sample average increases to 35 percent. The proportion of family owned firms rises considerably for medium sized publicly traded firms (defined as those with a market capitalization of US$ 500 or higher). Among these medium sized publicly traded firms, La Porta *et al.* (1999) report that 45 percent of the firms in the sample are family controlled using the 20 percent cut off. The 10 percent cut off increases the sample average of family controlled firms among medium sized companies to 53 percent. Family holdings therefore represent the dominant form of control among medium sized firms.

[34] Claessens et *al.* (2000) cover firms in Hong Kong, Indonesia, Japan, Korea, Malaysia, The Philippines, Singapore, Taiwan and Thailand in their study.

Philippines and Thailand, the ten largest families control a third of the corporate sector. Family owners assume a dual role as both owners and mangers of the firms. Family owners tend to be among the most committed and long-term investors in the firm. This due to the fact that the family's wealth is closely intertwined with that of the firm and a longer term outlook results in family managed firms being less likely to forego superior investment opportunities to boost current earnings. Additional benefits also accrue owing to external bodies such as creditors and suppliers engaging in dealings with incumbent family managements for a longer period that is the case typically with non-family managements. Schulze, Lubatkin, Dino and Buchholtz (2001) introduce a perspective based on altruistic feelings towards family members. According this view, altruism creates a self – reinforcing set of incentives that motivate family members to be considerate to each other, sustain and maintain the family bond. These feelings result in reduced costs of reaching, monitoring and enforcing agreements (Lubatkin, Lane and Schulze, 2001).[35] Similar arguments are echoed by Davis, Schoorman, and Donaldson (1997) who state that family owners identify strongly with the firm and tend to view firms' performance as extension of their well-being. In support of some of these conjectures, Andersen and Reeb (2003) find that US firms with family holdings perform better than those that do not have such holdings. They also find that the presence of a family member as CEO yields superior performance when compared to outside CEOs. Anderson, Mansi and Reeb (2003) also find that the family's sustained presence in the firm creates powerful reputation effects that provide incentives for family members to enhance firm performance.[36]

However, higher levels of family ownership could result in risk aversion owing to the disproportionate share of the family's wealth being invested in the firm (Thomsen and Pedersen, 2000). Barclay and Holderness (1989) find that large ownership stakes reduce the probability of bidding by other agents which results in a reduction in the value of the firm. Higher levels of family ownership result in biased selection of

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[35] For a full exposition of the 'altruism' perspective and a critique of the Jensen and Meckling (1976) model applied to family owned and managed firms see Lubatkin, Lane and Schulze (2001); Schulze, Lubatkin, Dino, and Buchholtz (2001) and Schulze, Lubutkin, and Dino (2003).

[36] Non-linear relationships have been observed with regard to the influence of family ownership performance. Andersen and Reeb (2003) find that performance begins to taper off at around 30 percent ownership for US family firms and beyond 60 percent ownership levels non-family firms tend to perform better. Furthermore, there are differences between the performance of family managed firms depending on whether the founding family is present in the management or not. See Morck, Shleifer and Vishny (1988), Smith and Amoako-Adu (1999), Perez-Gonzalez (2002) and Caselli and Gennaioli (2003) for details.

managers and directors which lead to lower values relative to non-family firms (Gómez-Mejía, Núñez-Nickel, Gutiérrez, 2001). Especially those family controlled firms which are linked to business group structures tend to be plagued by expropriation concerns. Several studies have documented entrenchment and expropriation problems when family owners construct pyramidal and cross-holding structures for the purpose.[37] Most of these studies find a significant reduction in the performance and valuation of family controlled firms associated with business groups when compared to independent/ free-standing family or non-family firms owing to 'tunneling'. These issues are discussed at length in the section focusing on business groups in this chapter. The altruistic perspective introduced by Schulze *et al*. (2001) also suggests costs associated with family control. These stem from an exacerbation of self-control problems that confound horizontal agency relationships in these firms (Lubatkin, Lane and Schulze, 2001).[38]

2.2.2.2 Institutional holdings

A distinguishing characteristic of institutional holdings with respect to certain other owner categories is that they act as intermediate owners for the final agents. They are also rather diverse and represent pension funds (public and private), mutual funds, banks and insurance companies. In view of the large holdings among institutional owners particularly in the United States and United Kingdom and the spate of recent corporate governance scandals on both sides of the Atlantic, the spotlight has been on these investors.[39] As firms particularly in the Anglo-Saxon economies are characterized by a pronounced separation of ownership and control owing to the wide dispersion in ownership, institutional shareholders are often seen as potentially one of the most important agents to monitor firm management. However, the diversity in their

[37] These studies include Johnson, La Porta, Lopez-de-Silanes and Shleifer (2000), Johnson, Boone, Breach and Friedman (2000), Bertrand, Mehta and Mullainathan (2002), Claessens, Djankov, Fan and Lang (2002), Bae, Kang, and Kim (2002), Joh (2003), Lins (2003), Lemmon and Lins (2003), Friedman, Johnson and Mitton (2003) and Baek, Kang, and Park (2004).

[38] This best illustrated through Lubatkin *et al.* (2001) "…selfish family agents, for example, have incentive to free-ride to the extent that the benefits they gain from taking advantage of the family's generosity are greater than the losses they suffer from causing the family harm" other problems arise because "…the self-control problems that altruism and owner-control exacerbate can make it difficult for the founder to choose between doing that which is best for themselves, best for their family and because product markets place obvious demands on their firm as a going-concern. This limits the founder's ability to make impartial (that is economically rational) business decisions. The problem is that if the founder remains untethered by internal governance mechanisms, self-control problems can cause their business decisions to lack consistency."

[39] Hotchkiss and Strickland (2003) report institutional holdings of around 60 percent for their sample of 203 US firms. Gompers and Mertrick (2001) report average institutional ownership of 55 percent for the largest quintile of CRSP stocks. McConnell and Wahal (2000) report average institutional holdings of 40 percent in a sample of 2,500 US firms.

composition, attitudes and goals of these institutional owners result in considerable heterogeneity in their trading behavior and their relationship to firm performance. A recent study by Hotchkiss and Strickland (2003) finds evidence in support of this conjecture among US institutional funds. They relate the heterogeneity in investment style, momentum trading behavior, and portfolio turnover to differences in the magnitude of price earnings at the time of earnings announcements.

Several articles have examined the nature of institutional investor activism and their influence on firm governance. The extent of activism however displays a wide variation depending on the nature of the institutional investor. For instance, pension funds and particularly those belonging to the public such as CalPERS (California Public Employees Retirement System) have been among the most visible institutional investors with regard to governance issues. They are predisposed to engage in a high degree of activism due to their independent character and lack of commercial relationships with companies they invest in. They are therefore *pressure-resistant* and display a high degree of activism.[40] In contrast, insurance companies and banks tend to be particularly *pressure- sensitive*, primarily on account of the fact that much of their business is derived from corporations in which they hold equity positions. Mutual funds and private pension funds display moderate levels of activism. While private pension funds have a long-term horizon, their activism tends to be tempered on account of greater focus on financial performance.[41] Moreover, mutual fund managers tend to vote with their 'feet' favoring 'exit' over 'voice' when their financial targets are not met.[42]

While some scholars see the institutional shareholder as the ideal owner (Monks and Minow, 2001:153-154) owing to their unique features and highly visible and activist role in face of rising governance concerns, the impact of this increased activism is at best ambiguous. In a survey on shareholder activism, Karpoff (2001) finds no evidence

[40] See Black (1990), Monks and Minow (2001:123-130) and Ryan and Schneider (2002) for a detailed description of CalPERS' activism and also for similar examples of activism by other state and federal public pension fund systems in the United States.

[41] Some commentators in the US believe that public pension funds are more effective monitors of management because they vote their own shares in contrast to private pension funds that usually delegate their voting to external money managers. However, Romano (1993) finds no support for this conjecture (Gillan and Starks, 2003)

[42] TIAA-CERF is a well known activist pension fund but is often classified separately as it is neither wholly public or private. It is the largest pension fund in the United States with 290 billion dollars in assets in 2001. It's size and unique position have given it unusual freedom to take up an activist role in governance issues (See Monks and Minow, 2001: 130-131 for details)

that increased activism creates shareholder wealth or spurs performance improvements. Other researchers such as Coffee (1991), Romano (1993) and Black (1998) voice similar concerns by questioning the abilities and incentives of institutional owners to be effective monitors.[43] These is some evidence of institutional investor activism outside the US as well. Gillian and Starks (2003) report that mutual funds and newly privatized pension funds have in Europe are prominent shareholder activists. Choi and Cho (2003) investigating the issue among Korean *Chaebols* find no evidence of institutional investor activism disciplining controlling owners.[44]

2.2.2.3 Corporate holdings

One the few studies that has extensively focused on the role of corporate holdings is Allen and Phillips (2000). They examine the impact of long-term block ownership by corporations and performance changes in firms with corporate block holders by examining a sample of 402 block equity transactions among US firms. Allen and Phillips (2000) report that the average extent of these holdings is fairly substantial at around 20 percent. Their findings indicate that corporate equity holdings when combined with product market relationships especially in R & D intensive industries lead to improvements in operating performance and substantial increases in investment expenditures by target firms. Furthermore, they document that stock prices react favorably to announcements of corporate equity prices in target firms particularly in those cases where product market relationships are formed between target firms and corporate block owners. Overall, their results are indicative of the importance of corporate ownership in conjunction with product market alliances helping firms to reduce the contracting and ex-post holdup costs involved in creating specialized assets. Additionally, Thomsen and Pedersen (2000) also state that corporate ownership is associated with linkages between companies at different stages in the value chain and knowledge transfers. Apart from corporate holdings in independent or freestanding firms, corporate holdings are also extensively used in pyramidal and cross-holding structures in business groups to exercise control among group-affiliated firms. This is

[43] Black (1998) for instance, offers the following reasons for ineffectiveness of institutional investor activism: (a) Most shareholder proposals are precatory and hence can be ignored by management. (b) The level of shareholder proposal activity is low (c) Shareholders are unable to organize effectively to influence management. He further states "..that even the most activist institutions spend less than half a basis point per year on their governance efforts." Moreover, "…institutional investors vote on thousands of issues a year and devote only a limited effort in deciding how to vote at a particular firm. In a vast majority of cases, an institution will either support management or follow a pre-existing voting guideline."

[44] Choi and Cho (2003) study the role of a group of institutional investors lead by the People's Solidarity for Participatory Democracy (PSPD) among Korean *Chaebols*.

explored in detail later in the section dealing with business groups in this chapter. When corporate holdings are employed as a mechanism to control group-affiliated firms, they can be categorized as inside holdings. Alternatively, when corporate holdings are devoid of group-affiliation as in the case of independent firms they can be viewed as outside holdings.

2.2.2.4 Foreign holdings

Foreign holdings constitute an important block of ownership among many firms in countries around the world. While there are some country specific accounts of the extent of foreign holdings, most of the systematic information pertaining to foreign holdings across countries around the world is available only at the macro-economic level. For instance, the *World Investment Report 2001, UNCTAD* gives a detailed account of the patterns of foreign direct investment (FDI) inflows/outflows across the globe and documents some of the linkages between foreign and domestic firms. However, to the best of our knowledge there exists hardly any study which provides information on the patterns of foreign ownership at the firm level across the world.

There are important governance implications for firms with and without foreign holdings which ultimately have a bearing on the performance of firms. These performance differences arise from the possession of certain firm specific advantages that accrue to the firm with foreign ownership. These firm specific advantages stem from advanced technological know-how, marketing and managing skills, export contacts, coordinated relationships with suppliers and customers and reputation (Aitken and Harrison, 1999). Empirical studies have found evidence supporting such a conjecture. For instance, using a sample of Canadian firms, Boardman, Shapiro and Vining (1997) find significant performance differences among multinational enterprises or their subsidiaries and domestic firms. Among emerging economies, Willmore (1986) analyzing a matched sample of foreign and domestic firms in Brazil and finds foreign firms to have higher ratios of value-added to output, higher labor productivity and greater capital intensity among others and among Thai firms, Wiwattanakantang (2001) finds that foreign controlled firms exhibit superior performance. [45]

However, foreign holdings do not constitute a homogenous block. Apart from foreign direct investments (FDI), the other major source of foreign capital is foreign

[45] See Boardman *et al.* (1997) for a list of literature concerning the performance of multinational enterprises or their subsidiaries in comparison to domestic firms in developed economies.

See Jenkins (1990) for a comparative assessment in less developed countries or emerging economies.

portfolio or institutional investment. (FPI/FII). In recent years FPI/FII, in particular, has risen dramatically with huge amounts of this so called 'hot capital' being shifted across countries by investment managers owing to a more conducive climate by host nations for such investments and due to the pursuit of investment managers seeking superior returns.

Wilkins (1999) agues that there substantial differences between FDI and FPI and that they have a different impact on the economies of recipient countries. She states that

> "*The impact of inward foreign direct investment (FDI) and foreign portfolio investment (FPI) on host economies is markedly different. Capital is not homogenous. Its use is what matters (…) A transnational corporation (TNC) transfers core competencies and expects return on the whole package, not only on capital provided and mobilized (…) The 'visible hand' of the firm allocates the resources to productive use. By contrast, the foreign portfolio investor expects generally to leave the management of the business (or government) to the recipient (…) Incentive structures in the use of FDI and FPI funds are entirely different. The responses to inadequate performance of the investment can be expected to be different with FDI and FPI. The impact of FDI on stock markets tends to be indirect. When FPI involves host country securities (stocks or bonds), it becomes associated with the functioning of national stock markets and can have a major impact on stock market performance, especially if markets are thin"*

Foreign portfolio or institutional investors can therefore behave in a manner that is significantly different from foreign corporate investors (investments characterized as FDI). In the case of foreign financial institutions, decisions to buy and sell shares of domestic firms are made by fund managers, whose performance is measured by comparing their results with a stock market index and/or with competing institutions of a similar class. These institutions have different investment horizons and are primarily oriented towards stock market based measures of performance. They have the requisite incentives to sell their stakes unless a firm can maintain short-term capital market gains. Foreign fund managers also manage a portfolio of a large number of investments in different industries to obtain the benefits associated with a diversified portfolio of investments. The differences between foreign corporate and portfolio investors is revisited in *Chapter 3* where it constitutes a core concern.

2.3 Business Groups

Business groups are a widely prevalent organizational form in most emerging markets and in many developed economies. The ubiquity of business groups can be ascertained through the listing provided in *Table 2.1*.

Table 2.1
Business groups around the world

The list below is representative of some sources on business groups. The list is adapted from Ghemawat and Khanna (1998) and adds on to their list of sources. In addition to the studies listed below there are several cross-country studies of business groups. These include Claessens, Djankov and Lang (2000), Khanna and Rivkin (2001), Faccio, Lang and Young (2001), Faccio and Young (2002), Lins and Servaes (2002), Khanna and Yafeh (2005).

Argentina	Guillén (2001), Carrerra, Mesquita, Perkins,Vassolo (2003)
Brazil	Coutinho and Rabelo (2003)
Belgium	Daems (1977), Van Hulle (1998), Becht, Chapelle & Renneboog (2002), Buysschaert, Deloof & Jegers (2004)
Chile	Zeitlin, Ewen & Ratcliff (1974), Majluf, Abarca, Rodriguez & Fuentes (1996), Khanna and Palepu (1999), Khanna and Palepu (2000c)
China	Kidd & Lu (1999), Keister (2000)
Costa Rica	Stratchan (1976)
Hong Kong	Knoop & Yoshino (1995), Wong (1996)
France	Jacquemin & Ghellinck (1980), Encaoua & Jacqemin (1982)
India	Hazari (1966), Kothari (1967), Herdeck & Piramal (1985), Goyal (1988), Dutta (1997). Ghemawat & Khanna (1998), Khanna & Palepu (1997, 1999, 2000b, 2004)
Indonesia	Robinson (1986), Schwartz (1992), Chui, Titman & Wei (2002), Sato (2004)
Israel	Maman (2002)
Italy	Bianchi, Bianco & Enriques (2002)
Japan	Caves & Uekusa (1976), Goto (1982), Ueda (1996), Hoshi, Kashyap & Scharfstein (1991), Weinstein & Yafeh (1995), Orrù, Biggart, Hamilton (1997), Lincoln, Gerlach, & Ahmadjian. (1996), Gedajlovic & Shapiro (2002), Morck & Nakamura (2003), Gramlich,, Limpaphayom. & Rhee (2004)
Malaysia	Ling (1992), Khanna, Yoshino & Melito (1996), Kiong (1996)
Mexico	Strachan (1976), Camp (1989), La Porta, Lopez-de Silanes & Zamarripa (2003)
Nicaragua	Strachan (1976)
Pakistan	White (1974)
Philippines	Hawes (1992), Sullivan & Unite (2001)
Russia	Blasi, Kroumova & Kruse (1997), Perotti & Gelfer (2001)
Singapore	Kiong (1996) Tsui-Auch & Lee (2003)
South Korea	Chang & Choi (1988), Amsden (1989, 1996), Zeile (1996), Shin & Kwon (1999) Guillén (2001), Joh (2003)
South Africa	Malherbe & Segal (2003)
Spain	Guillén (2001), Crespí-Caldera & García (2002)
Taiwan	Wang (1992), Numazaki (1996), Chung (2004)
Thailand	Suehiro (1992), Wiwattanakantang (2001), Charumilind, Kali, Wiwattanakantang (2006)
Turkey	Gonenc, Kan & Karadagli (2004)

References to business groups go by different names: Japanese pre-war *Zaibatsu* and the present *Keiretsu*, Korean *Chaebol*, Latin and Central American *Grupos Economicos*, Pakistani and Turkish family holdings, German *Konzerne*, Taiwanese *Jituanqiye*, Chinese *Quanxiqiye* and Italian small-firm industrial districts among others.[46]

They play a prominent role in the economies of these nations and contribute to a significant proportion of the nations' output. Their influence can gauged from the fact that the stock market capitalization of top ten business groups in a country such as Taiwan is greater than the country's Gross Domestic Product (GDP).[47] There is no legal definition of a business group in most countries. However most researchers consider a business group to be a collection of firms linked together by some common ownership and management by family members. Stratchan (1976) defines a group as a 'long term association of a great diversity of firms and the men who own and manage these firms'.

Leff (1978) refers to a business group as organizational entity which has the following features:

(1)"…multicompany firm which transacts in different markets but which does so under common entrepreneurial and financial control
(2)"… draws its capital and its high level managers from sources which transcend a single family…participants are people linked by relations of interpersonal trust, on the basis of similar personal, ethnic, or communal background."
(3) "..invest and produce in several product markets rather than a single product line."
(4) "..usually exercise a considerable degree of market power in the activities where they operate."

[46] However, it should be noted that the treatment of business groups in this thesis totally excludes small-firm industrial clusters of the Italian kind in the scope of business groups.

[47] Other countries with substantial levels of business group activity measured by the stock market capitalization of the top ten business groups as a proportion of the GDP include South Korea (39.95%), India (38.37%), Mexico (36.27%), Spain (35.41%) and Indonesia (33.62%). Figures relate to 1995 and are from *Table 3.2*, Guillén (2000: 72).

Additionally, in 1984, the top 50 Korean *Chaebol* controlled about 80 percent of the GNP and in 1991 the top five *Chaebol* had revenues equivalent to just under half of Korea's GNP (Maman, 2002). Four groups in Nicaragua, in the early 1970s accounted for 35 percent of all loans and investments in the private financial sector. While in Pakistan in 1968, 10 groups controlled 33 percent of all assets in the manufacturing sector and 30 groups controlled 52 percent of the assets and in India, the 4 largest groups held 17% of the assets of public and private companies and the top 20 groups controlled 28% of the total assets in 1958 (Leff, 1978). More details regarding other countries is available in *Table 3.2*, Guillén (2000: 72).

Granovetter (1995) defines business groups as

> *'… collections of firms bound together in some formal and/or informal ways, characterized by an indeterminate level of binding. This means that we exclude, one the one hand, a set of firms bound merely by short-term strategic alliances, and on the other, a set of firms legally consolidated into a single entity.'*

Other widely cited definitions include those by scholars such as, Chang and Hong (2000), Khanna and Rivkin (2001), Faccio, Lang and Young (2001), Feenstra, Huang and Hamilton (2003) among others. [48]

2.3.1 Why do business groups exist?

The formation and wide spread prevalence of business groups has been a subject of active debate recently. Some of the scholars who have contributed to the advancement of the field include Leff (1978); Amsden and Hikino (1994); Granovetter (1995); Ghemawat and Khanna (1998); Khanna (2000); Guillén (2000; 2001) and Feenstra, Huang and Hamilton (2003). These theories and perspectives on group formation can be subsumed under two broad categories. One approach highlights the 'intermediation capabilities' of group structures. Groups are generally viewed in a favorable light, as far the proponents of this approach are concerned. The discussion pertaining to intermediation abilities draws extensively from Guillén (2000) and Guillén (2001). In contrast, an alternative perspective tends to cast groups as 'rent-seeking' organizational structures that engage in socially unproductive activities. Groups therefore tend to be

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[48] Chang and Hong (2000) define a business group "…a gathering of formally independent firms under the single common administrative and financial control of one family."

Khanna and Rivkin (2001) define a business group as set of firms which, though legally independent are bound together by a constellation of formal and informal ties that are accustomed to taking coordinated action

Faccio, Lang and Young (2001) define a group-affiliated firm as one that "…satisfies one of the following criteria: (i) it is controlled by a shareholder via pyramiding, i.e., indirectly through a chain of corporations; (ii) it controls another corporation in the sample; (iii) it has the same controlling shareholder as at least one other corporation the sample; (iv) its controlling shareholder is a widely held corporation or a widely held financial institution."

Feenstra, Huang and Hamilton (2003) define business group "…as a set of upstream and downstream producers that jointly maximize profits."

viewed rather unfavorably by researchers on this side of the theoretical divide. The propensity of business groups should therefore be higher in those economies that afford these intermediation and rent-seeking opportunities. This is illustrated in the matrix depicted in *Figure 2.2*. Some of the intermediation and rent seeking perspectives are illustrated below.

Figure 2.2
When are business groups likely to form?

		Market Failures and Policy distortions	
		High	Low
Quality of Investor protection	Low	*Environment highly conducive for Business groups*	*Environment conducive for Business groups*
	High	*Environment conducive for Business groups*	*Low probability of Business groups forming*

A. The intermediation perspective

2.3.1.1 Modernization and neo-classical theory

These theories assume that business groups fill so called 'institutional voids'. These 'institutional voids' are particularly prevalent in emerging/developing economies on account of market failures among labor, capital and product markets.[49] For instance, groups foster development by rotating managerial talent from urban areas to underdeveloped regions and help in channeling capital obtained from urban financial institutions to these underdeveloped regions (Fisman and Khanna, 2004). The 'modernization' perspective to explain business group formation is also adopted by Kali (2003), who examines the relationship between capital market development and business group formation. He argues that as the economy progresses from a scenario where informational and intermediation costs are severe (a situation wherein neither business groups nor stock markets are feasible) to a stage further along the growth

[49] See Khanna and Palepu (1997) for an extensive discussion of these intermediation capabilities.

curve, business groups begin to emerge and drive modernization despite the absence of a fully developed stock market.[50] Product market development is facilitated when groups leverage their brand identity across multiple product categories.

In addition, groups posses the necessary political clout to facilitate interaction with key government officials (Pagano and Volpin, 2001) which often leads to preferential access to permits and licenses and also facilitates the preemption of their use by *de novo* entrants in certain cases (Khanna, 2000). This assumes importance in most emerging markets such as India since despite recent liberalization initiatives, the level of regulation continues to be high and companies require permission for a range of activities such as exiting business, changing prices on commodities and importing raw materials among others. Bureaucrats exercise a considerable amount of discretion in the application of rules concerning these decisions (Khanna and Palepu, 1997). Furthermore, several groups possess a reputation for honesty and reliability, which are scarce commodities in emerging economies wherein the efficiency of the judicial process is sub-optimal, and contract enforcement is costly. Business groups are therefore regarded as functional substitutes for markets that fail and the greater the nature of these imperfections, the more fertile the ground for their emergence (Guillén, 2001).

2.3.1.2 Late-industrialization and dependency theory

Late industrialization theory highlights the role played by policymakers in 'autonomous states' in the formation of business groups (Guillén, 2001). Guillén (2001) citing Carruthers (1994) defines 'autonomous states' as "those that are free from socially rooted demands and from struggles among class or group interests when it comes to setting their goals and/or pursuing them." East Asian economies are particularly characteristic of 'autonomous states'. A typical example is South Korea. Select entrepreneurs in these countries are directed by policy makers to enter new industries as the nations move forward from manufacturing in light industries to more heavy and capital goods manufacturing (see e.g. Amsden, 1989). Due to the conducive climate afforded by policy makers in these 'autonomous states', late industrialization theory predicts that business groups will be prominent actors in the economies of these nations. In a related vein, even if the state adopts a less proactive role in encouraging select entrepreneurial business groups, a pattern of 'dependent development' can emerge which results in a triple alliance between foreign multinationals, the state, and a

[50] Eventually according to Kali (2003), if intermediation costs continue to fall, the continued development of capital markets renders business groups obsolete.

few large business groups (Evans, 1979). This is referred to as dependency theory. Business groups in this scenario flourish owing to the fact that the state uses its resources to secure political and economic support of entrepreneurs for its strategy of internal development (Guillén, 2001).

2.3.1.3 Resource based theory

The principal assumption behind the resource based theory for the formation of business groups as advocated by Guillén (2000) is that "..entrepreneurs and firms in emerging economies create business groups if political-economic conditions allow them to acquire and maintain the capability of combining foreign and domestic resources-inputs, processes, and market access-to repeatedly enter new industries." The capabilities which these entrepreneurial groups posses cover the entire spectrum of skills associated with obtaining requisite licenses, technology, training of personnel and distribution networks. As this generic capability is embodied in an organization's owners, managers and routines, it is difficult to trade. Moreover, once a new plant is commissioned and is up and running, this capability lies dormant. There is therefore a strong urge for those entrepreneurial groups that possess this capability to diversify across a wide range of industries. The business group's deep pockets therefore serve a strategic role in furthering product market competition (See Cestone and Fumagalli, 2005). While this generic capability represents a vital ingredient in explaining the scope of the activities engaged by these groups, they are not sufficient for the long run sustainability of the competitive advantage of these business groups. To sustain their competitive advantage the capability needs to be inimitable as well (Barney, 1991, Peteraf, 1993). Guillén (2000) contends that this 'inimitability' is derived from the prevailing institutional environment in which these business groups operate. Specifically, the sustainability of the competitive advantage of business groups is hypothesized to be greater in emerging economies with asymmetric trade and investment conditions, as under these conditions, the entrepreneurial groups (vis à vis other independent entities) are uniquely positioned to exploit their superior ability to combine foreign and domestic resources for repeated industry entry (see Guillén, 2000 for a complete exposition of the concepts).

B. The rent-seeking perspective

2.3.1.4 An evolutionary response to extract private benefits of control

The organizational structure of a typical business group often leads to a number of group-affiliated companies controlled together by pyramidal and cross-holding

structures. These structures are created for the purpose of solving what Aikawa (1934) termed as the 'capitalist's quandary'. Such a dilemma arises owing to fact that if the capitalist uses only his own money or his family's money, his scale of operations is limited. The capitalist can solve this problem by tapping the capital market but the price paid would be the risk of loosing control over his or her firm. Using pyramidal and cross-holding structures provides an ideal solution to the capitalist as it secures control and provides access to much needed capital.

However, these structures also enable the controlling owners of the business group to appropriate certain private benefits of control. These private benefits accrue owing to transfer of value from firms in which the controlling owners have low cash flow rights to those firms in which they have higher cash flow rights. Such a phenomenon is referred to as tunneling (See Johnson *et al.* 2000). These value transfers take place by orchestrating inter-corporate transactions through transfer pricing, provision of capital at artificial prices, inflated payments for intangibles such as patents, brand names, and insurance (Morck *et al*. 2004). Propping (or negative tunneling) is a related phenomenon wherein controlling owners prop up lower performing or struggling firms for the benefit of controlling owners. Tunneling and propping can be especially potent devices in countries with low investor protection and minority shareholder rights. Proponents of this perspective tend to view the appearance of business groups as natural ramifications of an environment with poor investor protection (Almeida and Wolfenzon, 2004).

The literature also treats propping and tunneling as related-party transactions i.e., transactions between the controlled company and the controlling party Nenova (2004). Empirical evidence supports the view that business groups are particularly conducive to practices involving tunneling/propping or related party transactions leading to the detriment of the welfare of minority shareholders of the various firms in the group.[51] These negative effects could ultimately extend beyond the individual firm or the business group. In a recent paper, Morck, Wolfenzon and Yeung (2004) speculate on the possibility of concentrated business group structures leading to a sub-optimal political equilibrium which they term as 'economic entrenchment'.[52]

[51] See Bertrand, Mehta and Mullainathan (2002), Nam (2001), Friedman, Johnson and Mitton (2003), Cheung, Rau and Stouraitis (2004), Nenova (2004) and Polsiri and Wiwattanakantang (2004)

[52] Morck, Wolfenzon and Yeung (2004) state "…entrusting the governance of huge slices of a country's corporate sector to a tiny collection of elites can bias capital allocation to the advantage of those elites and also reduce the pace of innovation. These effects, in turn, impede the development of capital markets, further distort capital allocation, and more generally retard growth. In addition, to preserve their

An additional reason for business group formation stems from the need to provide members of the controlling family with suitable employment opportunities. While it can be argued that a single firm could potentially resolve this problem, the use of multiple firms enables the patriarch to allocate separate businesses to each of his or her progeny minimizing thereby thorny control issues in individual firms

2.3.2 Types of business groups

Business groups can be associative or hierarchical as far as their structure is concerned. According to Brioschi, Marseguerra and Paleari (1999) an associative group is "…characterized by the absence of a holding company and may be viewed as a confederation of firms connected through mutual, non-majority shareholdings. Coordination of the group's business activities is enhanced by commonality of interest of member firms and is exploited through information exchanges and tacit rules of conduct". These groups are also referred to as horizontal groups and are characterized by a predominance of cross-holdings. The Japanese horizontal *Keiretsu* is a well-known example of an associative business group. Taiwanese and Chinese groups exhibit similar features. Hierarchical groups, on the other hand are defined by Brisochi *et al.* (1999) "…as a set of companies controlled but not entirely owned by a single main investor. Hierarchical groups are often organized as pyramids of companies controlled by the main investor through a holding company. A unique feature of pyramidal holdings is that it allows the main investor to exert control with a limited amount of capital." Korean *Chaebols* and most European business groups are hierarchical in character. Hierarchical groups are also referred to as vertical groups. These groups extensively employ pyramidal structures. Further differences also exist within these broad classifications. These relate to the presence (or absence) of financial intermediaries (such as main banks) in certain group structures, differences in integration levels among member firms in a group and asymmetries in the power relations between various members associated with business groups. Perotti and Gelfer

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privileged positions under the *status quo*, the controlling elites arguably use their political connections to stymie the institutional development of capital markets and to erect a variety of entry barriers. Such an outcome is a suboptimal political economy equilibrium, which we dub economic entrenchment "

See also Bhagwati's (1982) analysis concerning directly unproductive activities (DUP) undertaken by entrenched actors in an economy.

(2001) represents a study examining differences between bank centered and industrial groups. For business groups differing in integration levels, (see e.g. Feenstra, Huang, Hamilton, Huang, 2003), and for power asymmetries among groups (see e.g. Kim, Hoskisson and Wan, 2004)

2.3.3 Controlling mechanisms in business groups

The popular mechanisms used by the controlling owners to exercise control range include differential voting rights, pyramidal structures, cross-shareholdings and director interlocks. These mechanisms are elaborated below:

2.3.3.1 Differential voting rights

Differential voting rights or dual class equity is a legal device utilized by controlling owners in a number of countries to achieve separation of ownership and control. These can take the form of shares with limited voting rights (preferred shares) and non-voting shares. Differential voting rights lead to a considerable separation of the ownership and control rights associated with firms.[53] Their principal advantage lies in the controlling shareholders being able to raise capital without having to relinquish control as long as the practice is allowed by law and other shareholders are willing to give up their control rights. These shares with differential voting rights are extremely potent devices enabling the controlling family to allocate all voting rights associated with a fraction of shares that are assigned to the controlling family, while assigning no or limited voting rights to the remaining outstanding shares that are distributed to the other shareholders. Nenova (2003) in a cross-country study reports that dual class voting rights are extensively utilized in a number of countries, particularly in Brazil, Canada, Denmark, Finland, Germany, Italy, Norway, Korea, Mexico, Sweden and Switzerland.[54] Dual class equity therefore can serve as an ideal device to control group-affiliated firms. The value associated with possessing these blockholdings having superior voting rights is reflected in studies which have measured the premium associated with such blockholdings. For instance, Nenova (2003) in her study finds controlling blockholding premia to be as

[53] For instance, in study on US firms, DeAngelo and DeAngelo (1985), the use of Dual Class equity results in the median voting rights percentage held by managers exceeding their median implied cash flow interest by 33 percent (Voting rights represent 57 percent of the votes whereas the Cash flow interest is 24 percent). Studies examining voting rights in European countries also document a substantial divergence in ownership and voting rights. See for instance, De Jong, Kabir, Marra, and Röell (2001) for the distribution of ownership and voting rights among firms in The Netherlands.

[54] See also Faccio and Lang (2002).

high as 48 percent and 36 percent of firm value in countries such as South Korea and Mexico respectively.[55]

2.3.3.2 Pyramids

Pyramids are a means to enable controlling shareholders to control many firms which are collectively worth substantially more than the controlling shareholders actual wealth. The cash flow rights associated with a pyramidal structure can be calculated with the following formula:

$$\alpha = \left[\prod_{i=1}^{n}\right] s_i$$

wherein α represents fraction of firm's equity cash flow rights held by controlling shareholder. s_i is the fraction of shares held by controlling shareholder in *company i*. To illustrate this, let us take the simple case of a three firm pyramid, with s_i set at 0.5 for all three firms. In this case the controlling shareholder at the top of the pyramid is able to control the firm at the bottom of the pyramid with just 12.5 percent of its cash flow rights.[56] This leads to a separation in the control and cash flow rights of (37.5 percent (50 percent -12.5 percent)).

Pyramidal structures are widely prevalent is several East Asian and European economies. Claessens, Djankov and Lang (2000) investigating the separation of ownership and control in East Asian economies find that 38.7 percent of firms in their sample use pyramidal structures to control group firms. In particular, firms in Indonesia, Singapore, Taiwan and Korea use pyramidal controlling structures extensively.[57] Faccio, Lang and Young (2001) also report a high incidence of pyramiding in both East Asian and European economies. Pyramidal structures represent 48.48 percent of the sample in Asia while in Europe they represent 46.30 percent. Faccio *et al.* (2001) use two ownership thresholds at the 10 percent and 20 percent levels to determine the

[55] Other legal measures for separating ownership and control include: voting restriction and shareholder agreements. A voting restriction stipulates that a particular shareholder can vote for only a specified proportion of shares. A shareholder agreement regulates voting behavior through voting pacts or restricts sale of superior voting right shares to third parties. (see Cronqvist and Nilsson, 2003 for examples on the working of these devices)

[56] $\alpha = (0.5)^3 = 12.5$ percent Therefore, while the firm at the top of the pyramid (Company A) is able to control 50 percent of the firm at the bottom of the pyramid (Company C) via the intermediate firm (Company B). Company A is actually entitled only to 12.5 percent of its cash flow rights. For a full discussion of the concepts related to pyramiding see Bebchuk, Kraakman, and Triantis (2000), Morck and Nakamura (2003) and Morck, Wolfenzon and Yeung (2004)

[57] Claessens et *al.* (2000) covered firms in Hong Kong, Indonesia, Japan, Korea, Malaysia, The Philippines, Singapore, Taiwan and Thailand in their study.

incidence of pyramiding (or group-affiliation). The incidence of pyramidal structures at the 10 percent level is more in favor of Asia at 63.93 percent versus 49.24 percent in Europe. The overall incidence of pyramids for the sample is 47.26 percent (at the 10 percent ownership threshold) and 46.30 percent (at the 20 percent ownership threshold). Their sample consists of firms from France, Germany, Hong Kong, Indonesia, Italy, Japan, Malaysia, Philippines, Singapore, South Korea, Spain, Taiwan, Thailand and the United Kingdom. As per the 10 percent threshold, the incidence of pyramidal structures is highest in the Philippines at 76.79 percent whereas with the 20 percent threshold, pyramidal structures are most prevalent in Indonesia at 70.06 percent.

In contrast, Faccio and Lang (2002) document that the incidence of pyramids is lower in Europe than in Asia in their sample. Pyramidal structures are used by 19.13 percent of firms with Norway reporting the highest occurrence in their study (33.90 percent). The difference in the reported incidence of pyramids with regard to Faccio *et al.* (2001) could be as a consequence of the enlarged set of European countries that this study investigates. Faccio and Lang (2002) utilize firms from Austria, Belgium, Finland, Germany, Ireland, Italy, Norway, Portugal, Spain, Sweden, Switzerland and the UK. For more examples of pyramidal group structures see Bianchi *et al.* (2000) Claessens *et al.* (2000), Wiwattanakantang (2001), Faccio and Lang (2002), Sato (2004) and Buysschaert, Deloof and Jegers (2004).

2.3.3.3 Cross-holdings

Companies with cross or reciprocal holding structures are linked by horizontal cross-holdings that reinforce and entrench the power of the controlling owners. Unlike, pyramids, though, the voting rights used to control a group remain distributed throughout the group rather than in the hands of a single company or a controlling shareholder (Bebchuk *et al.*, 2000). These cross-holdings can take the form of symmetric or asymmetric holdings in each of the group firms by the various group affiliated firms.[58] Faccio and Lang (2002) report the prevalence of these structures to be highest in Germany and Norway. The incidence of cross-holding in general appears to be relatively lower *vis à vis* pyramids: 2.69 percent in Germany and 2.64 percent in Norway in Faccio and Lang's (2002) sample.[59] In Asia, Claessens *et al.* (2000) report

[58] For an elaboration of the concepts pertaining to control and cash flow rights among cross holding structures, see Bebchuk *et al.* (2000).

[59] Firms are defined as cross-held in Claessens *et al.* (2000) "…if the company has a controlling shareholder and owns any amount of shares in its controlling shareholder or in another company in that chain of control." A firm is considered to have a controlling owner if the owner has 20% of the vote.

the highest incidence of cross-holdings in Singapore at 15.7 percent and the lowest in Thailand at 0.8 percent.[60] Among the Japanese big six *Keiretsu* groups, Inoue (1999) reports that as of 1999, value based cross-holdings ranged from around 23 percent to 14 percent. *Mitusbishi*, *Sumitomo* and *Mitusi* have value based cross-holdings to the tune of 23 percent, *Fuji* and *Dai-Ichi Kangyo* have cross-holdings of 16 percent and Sanwa, the least amount of cross-holding at 14 percent.

2.3.3.4 Director interlocks

When the directors of a firm are on the board(s) of other firm(s), director interlocks or ties are formed. Director interlocks are fairly common and are extensively used in group-affiliated firms to exercise control and co-ordinate activities across the group (Pfeffer and Salancik, 1978) and to facilitate information sharing (Haunschild and Beckman, 1998).[61] Japanese *Keiretsu* firms in particular make extensive use of director or board interlocks to co-ordinate member firm activities. Additional examples include the use of director interlocks in French business groups such as Groupe Paribas, Gènèrale des Eaux and UAP among others (Windolf, 2002). These director interlocks take the form of Presidents' council or *Shacho-kai* memberships (see Linclon, Gerlach and Ahmadjian, 1996). Director interlocks can either be direct or indirect in nature. A direct interlock exists when there is a single path between two organizations. An indirect interlock exists when two organizations are linked by one or more third organizations (Pennings, 1980). In addition to their nature, the features which assume importance are interlocking intensity, directionality and strength. Intensity refers to the proportion of the directors which an organization shares with other organizations. Directionality refers to the fact that interdependence between the interlocks among organizations need not be symmetrical (i.e. interlocking directorates need not be reflexive: the link from *Firm A* to *Firm B* need not be equivalent the other way round-

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Faccio and Lang (2002) define a firm as cross-held if a "…firm Y is controlled by another firm, that is controlled by Y, or directly controls at least 20 percent its own stocks."

See Claessens *et al.* (2000), Wiwattanakantang (2001), Faccio and Lang (2002), Sato (2004) for examples of cross-holding group structures.

[60] For other countries in Asia, Claessens *et al.* (2000) report that the incidence of cross-holdings is as follows: Malaysia (14.9 percent), Japan (11.6 percent), Korea (9.4 percent), Hong-Kong (9.3 percent), Taiwan (8.6 percent), The Philippines (7.1 percent) and Indonesia (1.3 percent). The mean cross-holding incidence for the region was 10.1 percent.

[61] Eighty-six percent of billion-dollar company boards in the US include at least one Chief Executive Officer (CEO)/ Chief Operating Officer (COO) of another firm. Sixty-five percent of outside directors serve on two or more boards, 89 percent of inside directors are outside directors on other company's boards and a fifth of all directors served on four boards or more (Monks and Minow, 2001).

Firm B to *Firm A*). Strength relates to the nature of ties underlying these director interlocks. For instance, strong ties are more likely to cluster individuals into clearly demarcated, closely-knit groups whereas weak ties are single bridges between individuals in different groups (see Pennings, 1980 for an extensive discussion on these concepts).

2.4 Brief sketch of the Corporate landscape, Ownership structure and Business groups in India

2.4.1 Corporate Landscape

Organized economic activity in India remained relatively fragmented until the advent of British rule (Khanna and Palepu, 2004). After the cessation of monopoly rights of the British East India company, rival British merchants set up several trading houses. Indigenous business groups such as the *Tatas* emerged in the late 19th century.[62] The corporate sector in India can be broadly classified into two categories: companies owned by government[63] and privately owned companies. These government and privately owned companies can be further sub-categorized into widely held (Public limited companies) and those that are closely held (Private limited companies).[64] These privately owned companies include joint sector companies (representing collaborative ventures between the government and the private sector) and subsidiaries of foreign multinational enterprises. Post independence, there has been a rapid growth in corporate sector. In 1956-57 there were 29,357 companies in total. Of these 74 companies were government companies, 8,771 were public limited and 20,512 were private limited companies.[65] As per latest available figures, from the *Department of Company Affairs, Government of India*, (depicted in *Table 2.2*), the total number of companies in 2001-02 had risen to 584,184, almost a twenty-fold increase (*Column 5* of *Table 2.2*). Among these 584,184 firms, 1262 firms are government companies. Among

[62] See Khanna and Palepu (2004) for a brief discussion of the history of corporate ownership in India

[63] As per *Section 617* of the *Companies Act, 1956*, government companies are those in which not less than 51 percent of the paid–up capital is held by the central government or by any state government or government companies.

[64] As per *Section 3* of the *Companies Act, 1956*, private limited companies are those that restrict the number of their shareholders to 50, are prohibited from inviting the public from subscribing to any of their stocks and restrict the right to transfer shares. Public limited companies are defined as those that are not private limited companies and have a specified minimum paid-up capital. Currently, the minimum amount is 0.5 million rupees.

[65] Sourced from *Table 1*, Goyal (1988:2).

these government companies, 659 are public limited or widely held companies and 603 are private limited or closely held companies. These are shown in *Column 1*. Among non-government companies, 75,619 are widely held and 507,303 are closely held companies. See *Column 3*. While the bulk of the companies are private limited companies or closely held firms (almost 87 percent), they constitute only about 31 percent of the estimated paid up capital. See *Columns 5* and *6*. In fact, if government companies which are closely held are not taken into account, the estimated paid up capital drops further to 19.5 percent. See *Column 4*. This is indicative of the concentration of capital among the public limited companies or widely held firms and a few government companies.

Table 2.2
An overview of the corporate sector in India
(Source: *Table 7.1*, Annual report of the Ministry of Law, Justice and Company Affairs, Department of Company Affairs, Government of India, 2001-02)

Figures are as on 31.12.2001

	Government companies		**Non-Government companies**		**All Companies**	
	No. of companies	*Estimated paid up capital*[66]	*No. of companies*	*Estimated paid up capital*	*No. of companies*	*Estimated paid up capital*
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*
Public limited companies (Widely held)	659 (0.1%)[67]	4997.90 (14.7%)	75619 (13.0%)	18430.40 (54.2%)	76278 (13.1%)	23428.30 (68.9%)
Private limited companies (Closely held)	603 (0.1%)	3927.75 (11.6%)	507303 (86.8%)	6624.11 (19.5%)	507906 (86.9%)	10551.86 (31.1%)
Total	1262 (0.2%)	8925.65 (26.3%)	582922 (99.8%)	25054.51 (73.7%)	584184 (100.0%)	33980.16 (100.0%)

Of the total number companies only a small proportion of these companies are listed on the various stock exchanges. As of 2003, there were 9,644 companies listed across 24 stock exchanges in India.[68] Of these, 7,363 companies were listed on the *Bombay Stock Exchange (BSE)* and 1,471 companies were listed on the *National Stock Exchange*

[66] Estimated paid up capital is in billions of Indian Rupees

[67] Figures in parentheses refer to percentages of various company categories to overall totals.

[68] Bombay Stock Exchange (BSE) Annual Capital Review: Indian Finance Overview (2003)

(NSE).[69] Multiple listings of firms among the various stock exchanges exist. However, in recent years after the establishment of the *NSE,* the relative importance of many of the regional exchanges has declined considerably. Consequently, the *BSE* and the *NSE* account for the bulk of the turnover of shares in the country. Around 1000 companies are actively traded on the stock exchanges and the top 100 companies constitute almost 86 percent of the *BSE's* market capitalization. [70]

2.4.2 Ownership structure

Ownership information is more detailed for listed companies and is available through annual reports of companies and filings to regulatory institutions. Typically, ownership by investor category and by ownership tranches is disclosed. However, ownership information is not available up to the level of the ultimate beneficiary. Furthermore, information on the nature of pyramidal and cross-holdings structures which are prevalent among business groups in unavailable. The level of disclosure, though is constantly improving even as this thesis is being written on account of the adoption of various corporate governance codes which have recently come into force. Several provisions pertaining to these governance codes are mandatory owing to their incorporation in the listing agreements with various stock exchanges.

The ownership categories which are usually disclosed are those pertaining to financial institutions, corporate holdings, director and relatives holdings, foreign corporate and institutional holdings. Most of the financial institutions are government owned or are institutions in which government possesses a substantial degree of influence. Corporate holdings in a group–affiliated firm can represent pyramidal and/or cross-holding structures among companies in a group. Director holdings in India usually represent stakes by family directors owing to two reasons. Firstly, professional non-family directors rarely own shares in the firm in which they are employed. Secondly, even in the small number of cases wherein non-family directors do own stakes, they are minuscule in comparison to the stakes of family members.[71] Apart from these

[69] Bombay Stock Exchange (BSE) Annual Capital Review: Indian Finance Overview (2003) and IMF-World Bank, ROSC (2004)

[70] These figures are drawn from the IMF-World Bank, Report on the Observance of Standards and Codes (ROSC): Corporate Governance Country Assessment (2004); Department of Company Affairs (DCA); Government of India, Annual Report 2001-02 and Bombay Stock Exchange (BSE) Annual Capital Review: Indian Finance Overview (2003)

[71] It is useful to consider Director affiliations in India along three dimensions: (1) executive and non-executive, (2) family and non-family, and (3) group and non-group. For a non-group firm, total insider holdings include ownership stakes held by all executive/family directors, all non-executive/non-family (independent) directors as well as stakes held by relatives of all directors. The stakes held by

shareholder categories, the extent of government holdings, both by the central as well as various state governments, and the proportion of shares which are widely distributed among the investing public is also disclosed.

Among these ownership categories, the major blockholding categories are those pertaining to corporate, directors and relatives and foreign holdings. For instance, Sarkar and Sarkar (1999) in their study on ownership structure in India, report mean corporate holdings of 24 percent, director and relatives holding of 16 percent and foreign holdings of 10 percent. Around 40 percent of the holding is widely dispersed among the public.[72] Khanna and Palepu (2000b) in their study also report roughly comparable figures.

2.4.3 Business groups

Business groups in India depict caste and provincial origins. Most of these traditional groups come from the trading communities (e.g. *banias*) and their initial activities can be traced back to certain parts of the country, although, in more recent times some of the larger groups have assumed a pan-Indian operational character. Groups increased the number of companies under their fold when assets belonging to the erstwhile British companies were acquired. Traditionally, the management of most of these groups was *via* the *managing agency* system. Under this system, each of the participating firms signs a management contract with a managing agency owned by the group. The *managing agencies* in turn run these firms. Several of the largest business groups in India like the *Tatas* and the *Birlas* were initially run by managing agencies owned by them[73]. However, this system of managing groups has only historical

executive/family directors and relatives constitute the owner manager holdings and they form the bulk of the director and relative shareholdings. For a group firm, total insider holdings include stakes of the above-mentioned categories and the stakes held by domestic corporations affiliated with the same group.

[72] These statistics are based on a sample of 1613 listed manufacturing firms from the Center for Monitoring the Indian Economy (CMIE) database and are for the year 1995-96 (Sarkar and Sarkar, 1999)

[73] For a classic treatise on the managing agency system in India see Lokanathan (1935). "The managing agents were the pivot of the whole industrial system and owed their importance to the scarcity in the supply of entrepreneurial skills as well as of finance. They were initially appointed by the British companies seeking a foothold in the newly emerging industries of India (...) These managing agencies were actually intermediaries controlling the interests of a large set of companies in diverse activities, thus resembling some sort of a large holding company (…) The relation between the enterprises and the managing agents was defined contractually, with a given tenure and commissions fixed on supply contracts mediated by the agents, besides a title to a fixed percentage of enterprise profits."

See Bagchi (1972) and Gosawmi (1989) for elaborate accounts of the history of Industrialization in India.

relevance as the *managing agency* system was abolished in 1969 as a consequence of amendments in the statute governing corporations in India.

While firms in India are largely focused entities, the business groups tend to be diversified and have certain features similar to a typical western conglomerate or a Japanese *Keiretsu.* Similarities exist in the sense that akin to the headquarters of a conglomerate, the controlling family sets the overall strategic direction and regulates financial transfers. An important difference, though, is that unlike divisions of a typical conglomerate firm, each firm in India has its own unique set of shareholding comprising of various blockholders and the general public, and unlike the typical Japanese *Keiretsu*, Indian groups do not have an in-house financial institution.

While the controlling owners of groups in India do not form so-called 'politico-economic empires'[74] (Robinson, 1986), some of the business groups have a tremendous ability to translate their power into political clout. The largest business houses maintain 'industrial embassies' in the capital New Delhi, which serve the purpose of extensive lobbying with the political elite seeking privileges and exploiting the political equivalent of scale economies.[75]

Control over these group firms is typically exercised through inter-corporate equity investments (cross equity shareholdings), holding companies (pyramidal structures) and interlocking directorates. The complex network of cross and pyramidal holdings is evident from the partial structure of the largest business group in India, the *Tata* group which is depicted in *Figure 2.3.*

As is evident from *Figure 2.3*, *Tata Sons* represents the group HQ or holding company. In addition to *Tata Sons*, two other group companies, *Tata Industries* and the *Investment Corporation of India* represent two centers around which control is exercised over a number of other *Tata* group firms. Unfortunately precise details on the equity linkages among the various *Tata* group firms are unavailable to fully ascertain the nature of the cross and pyramidal holdings. For description of two other prominent

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See also Khanna and Palepu (2004) for discussion on the specifics of Indian business groups.

[74] In some countries, it is common for the states to be so enmeshed in the world of business groups that key actors within the state themselves form their own firms and business groups (Granovetter, 1995). These eventually lead to what are referred to as 'politico-economic empires'.

[75] See Encarnation (1989) for a discussion of these 'industrial embassies'.

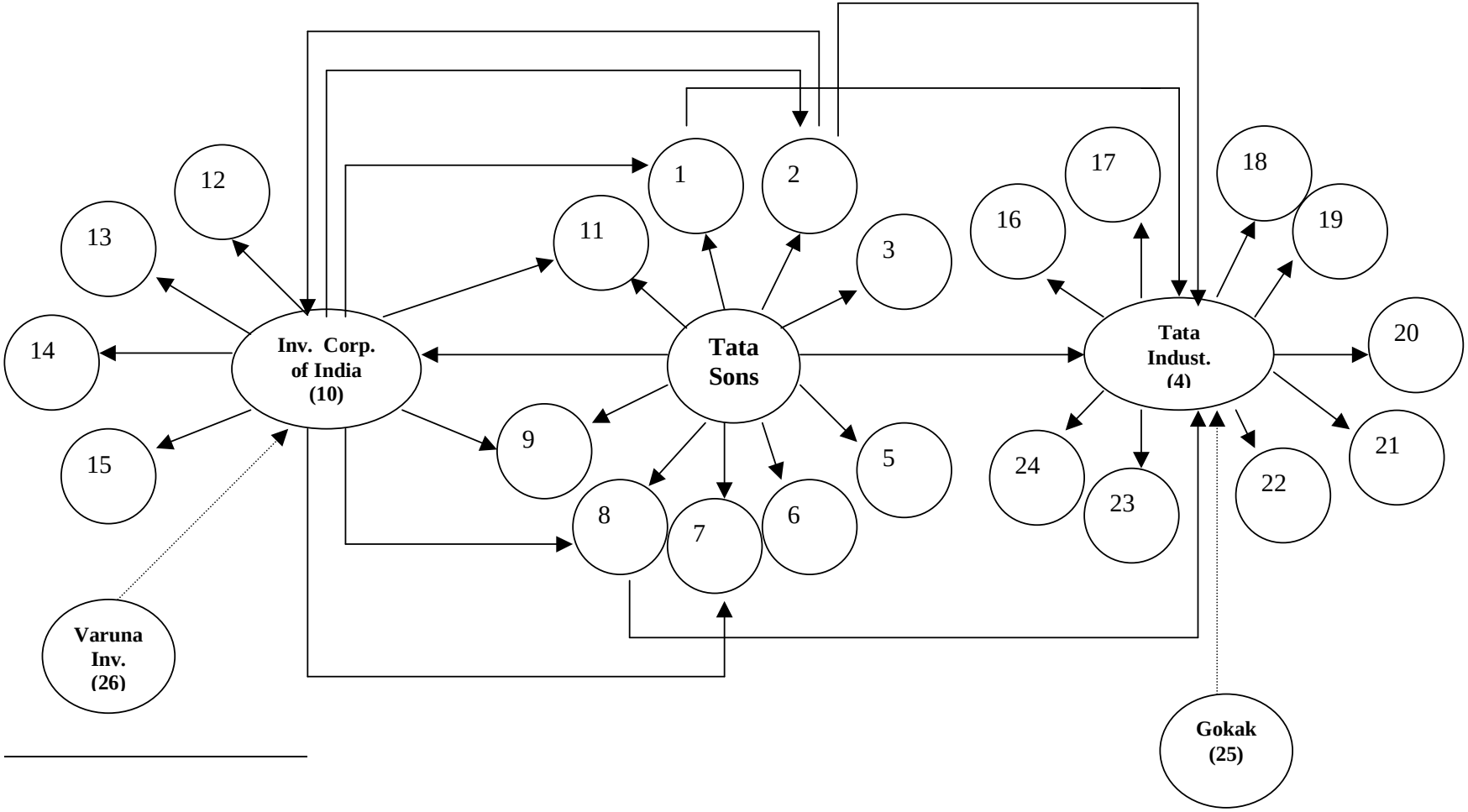
groups: The *R.P. Goenka* and *L.M. Thapar* groups see Ghemawat and Khanna (1998). Hazari (1967) provides an exhaustive account of some of the prominent business groups and their interrelationships. See also Goyal (1988) Encarnation (1989) for useful accounts of the some of the characteristics of Indian business groups.

Group firms in India generally advertise their affiliation to a particular group and these affiliations remain substantially stable over time. Despite the institution of a takeover code in the 1990s the practice of group firms interchanging group affiliations is relatively uncommon. Business groups also differ in the extent and diversity of their operations. The largest groups are active in wide variety of enterprises, ranging from automobile production to educational publishing. They cover vast tracts of the industrial sector and contribute to a significant chunk of the country's industrial output. [76] On the other hand, the bulk of the business groups can be categorized as small and medium sized, with the scale and scope of their activities being considerably more modest. The firms constituting business groups involve listed as well as unlisted firms. Furthermore, information pertaining to group affiliation is publicly available and it is relatively easy to identify group affiliation with a degree of accuracy in the Indian context. Each firm within a group has a separate legal entity and can be listed separately on the stock exchange. Most groups have less than five firms which are listed on Stock Exchanges such as the BSE. Khanna and Palepu (2004) report 1113 group-affiliated firms listed in various stock exchanges in 1993 in India. The 567 group-affiliated firms which they examined in detail belong to 252 different groups. Khanna and Palepu (2004) find that 95 percent of these groups have five or fewer affiliates. In effect, the average business group in India has around two listed firms. It is interesting to compare these figures pertaining to the group affiliation with those reported by Faccio *et al.* (2001) across a sample of countries in Europe and Asia. Their study reports that a large proportion of group-affiliated firms are in the range of up to five affiliated entities. Using a 20% control cut-off definition, for Europe, they report approximately 67% of firms belong to groups with five or fewer firms and for Asia they find that approximately 52% of firms belong to groups with up to five firms.[77]

[76] See Hazari (1967) and Encarnation (1989) for exhaustive accounts of the extent of operations of the largest Indian business groups.

[77] However, it should be borne in mind that Faccio *et al.* (2001) sample does not contain only listed firms associated with the group.

Figure 2.3
The Tata Group (partial structure)[78]



Company list

1. TISCO
2. Tata Chemicals
3. Indian Hotels
4. Tata Industries
5. Tata Electrical Company
6. Forbes, Forbes and Campbell
7. Voltas
8. TELCO
9. TOMCO
10. Investment Corporation of India
11. Tata Tea
12. Tata Metals and Strips
13. Tata Services
14. Titan Watches
15. ACC
16. Tata Industrial Finance
17. Tata Honeywell
18. Tata Finance
19. Tata Consultancy
20. Tata Housing company
21. Tata IBM
22. Tata Telecom
23. Tata Elxsi
24. High Tech Drilling
25. Gokak
26. Varuna Investments

Tata Sons represents the main 'promoter' company of the group and is the group headquarters. Two-thirds of the equity of *Tata Sons* is held by various philanthropic trusts endowed by members of the Tata Family. Currently the full group structure consists of 80 listed and unlisted companies. Moreover, several changes have recently been undertaken in the group structure which is not incorporated in the figure. Unfortunately information pertaining to equity linkages to incorporate these changes and depict the structure of the full group is unavailable.[79]

[86] The group structure is constructed using data on known equity linkages provided in page 17 of Tyabji (1998).
Information pertaining to *Gokak* and *Varuna Investments'* linkages with other Tata group companies is unavailable in Tyabji (1998). Other group companies in addition to ones depicted are also believed to hold equity in *Tata Industries* but precise details are unknown.

[79] Tata Group Website: http://www.tata.com/tata_sons/index.htm

2.5 Institutional background in India

A brief overview of the institutional context in India is provided below with an emphasis on the regulatory framework, recent liberalization initiatives and aspects pertaining to corporate governance in India.[80]

2.5.1 Regulatory framework and governance of corporates [81]

2.5.1.1 Capital markets

Capital markets in India have a long history. The Bombay Stock Exchange was established way back in 1875. However, until 1980, growth in the stock market was rather slow. The 1980s marked the beginnings of a turnaround. In period from 1980 to 1991, the market capitalization as a percentage of Gross Domestic Product (GDP) rose from 5.5 percent to 19.95 percent. The figures post 1991 are even more dramatic. Market capitalization as a percentage of GDP had risen to 64.42 percent by 1995. (Rao, Murthy and Ranganathan, 1999).[82] As of 2002, the market capitalization of firms in the BSE and NSE stood at US$ 271 billion, a figure which places the Indian capital market as the fourth largest after Japan, China and Australia in the Asia-Pacific region (Goswami, 2003).[83]

According to Rao *et al.* (1999) a number of reasons are responsible for this explosive development in capital markets. Firstly, *The Capital Issues Control Act (CICA) of 1947* was repealed in 1992. The *CICA* enabled the government to control new share issues and determine the issue price. Secondly, the virtual destruction of the *'license raj'*[84] generated enormous opportunities for the hitherto caged entrepreneurial

[80] The interested reader is referred to Joshi and Little (1994 and 1996) for comprehensive analysis of the Macro-economic environment pre and post liberalization. Additional references on the topic include Ahluwalia and Little (2000) and Srinivasan (2001)

[81] Please also refer to *Appendix 2.1*

[82] Other related figures also corroborate the explosive development in Capital markets during the 1980s to mid 1990s. The number of Stock Exchanges increased from 9 to 22, number of listed companies from 2,265 to 9,077 and the number of mutual fund investors had risen from 2 to 40 million between 1980 and 1993. (see Rao, Murthy and Ranganathan, 1999 and Singh, 2000:170 for details)

[83] The Market capitalization of the Tokyo Stock Exchange (Japan), Hong Kong and Shanghai Stock Exchanges (China) and Sydney Stock Exchange (Australia) were US$ 2069, US$ 796 and US$ 380 respectively as of 2002 (Goswami, 2003)

[84] The word '*raj*' is literally associated with the colonial rule of the British. In the text the analogy is made in a similar vein with regard to the reign by the politicians, bureaucrats and influential businessmen in India after independence in 1947. As per the provisions of the *Industrial Development and Regulation*

class.[85] Thirdly, the entry of a large number of small financial intermediaries and the investing public owing to a buoyant stock market.

2.5.1.2 Industrial sector

Following independence in 1947, India's industrial policy was guided by systems of industrial and import licensing to foster import-substituting indigenous industrial development (Majumdar, 2004). Soviet style five-year plans were initiated and the *Industries Development and Regulation (IDR) Act* was enacted in 1951 setting the stage for active government intervention. The second five-year plan (1956-61) in particular authored by P.C. Mahalanobis provided the analytical foundation for the development strategy that was pursued for the next thirty-five years (Srinivasan, 2004).[86] This lead to the *license raj* era: a period from 1956 to 1991 when the Indian economy was in the grip of "a maze of Kafkaesque controls" to the use Bhagwati's evocative characterization of the situation.[87] The prevailing environment during the period was conducive to wide spread rent-seeking. Entrepreneurial families and business groups used their political clout to use the licensing regime to their advantage. They used their fortunes built up in traditional sectors such as textiles, coal, iron and steel to secure licenses that enabled

Act (1956), permission from the central government was needed for investment in new divisions and also for substantial expansion of capacity in existing divisions. Industrial licensing reduced competition by acting as a barrier for new entry ostensibly to avoid emergence of 'wasteful' surplus capacity. It encouraged the establishment of smaller sub-optimal scale plants, partly in order to encourage a broader spread of entrepreneurship. The system was often used to push new investments into backward areas in the hope of promoting regional equity. The system also discouraged systematic project evaluation by banks and financial institutions by creating a presumption in favor of supporting projects, which had received approval from the government. The inefficiencies generated by the system in turn became the excuse to seek tailor made protection through protective trade policies (see Ahluwalia, 1999).

[85] This dismantling of the *'license raj'* is discussed in the section on recent liberalization initiatives later in this chapter.

[86] Under its ambit, the system involved, industrial licensing, wherein the scale, technology and location of any investment project other than relatively smaller units were regulated and permission from the government was required to expand, relocate and change the output or input mixes of manufacturing plants, stringent foreign exchange controls which resulted in requirements to surrender foreign exchange earnings at government determined exchange rates, import licensing, controls on the price at which equity is allocated and price controls on vital consumption goods and critical inputs (see Srinivasan, 2001: 1-15 for an elaboration).

See also Mohan and Aggarwal (1990) for a discussion of the multitude of procedures that an entrepreneur was required undergo in the 1960s and 1970s in India before any production could commence.

[87] Bhagwati (1993: 49) states "The Indian planners and bureaucrats sought to regulate both domestic entry and export competition, to eliminate product diversification beyond what was licensed, to penalize unauthorized expansion of capacity, to allocate and prevent the reallocation of imported inputs and indeed define and eliminate virtually all aspects of investment through a maze of Kafkaesque controls. This all-encompassing bureaucratic intrusiveness and omnipotence has no rationale in economic and social logic…"

them to enter newer industries in aluminum, paper, cement and engineering enjoying monopolistic and oligopolistic privileges in the process (Goswami, 2001). Furthermore, licenses were issued in excess of capacity and influential parties and large houses were permitted to preempt capacities (Paranjape, 1988). The enactment of the *Monopolies and Restrictive Trade Practices (MRTP) Act* in 1969 further exacerbated the extent of 'dirigisme' or government involvement. Furthermore, the *MRTP Act* required undertakings with assets of one billion rupees or more and so called 'dominant undertakings' to go through additional procedures to obtain industrial licenses making it extremely cumbersome for these companies to successfully procure one.[88]

2.5.1.3 Corporate sector

Apart from the various five-year plans, *IDR Act, 1956* and the draconian *MRTP Act, 1969, The Companies Act, 1956,* is the major piece of legislation that impinges on the governance of Indian companies. *The Companies Act, 1956* was highly repressive in character and gave the government the ability to control several aspects of corporate policy pertaining to the internal governance of the corporation including the issue of shares and debentures, the appointment and pay of senior management and auditors among others, through a long catalogue of requirements and returns (Joshi and Little, 1996). Furthermore, the act restricts the transfer of shares in certain cases. For instance, *Section 108D (1)* of the *Companies Act, 1956* states that "Where the Central Government is satisfied that as a result of the transfer of any share or block of shares of a company, a change in the controlling interest of the company is likely to take place and that such change would be prejudicial to the interest of the company or to the public interest, that Government may direct the company not to give effect to the transfer of any share or block of shares…"[89] Several such restrictions in the act coupled with the tendency of the government and the courts to favor incumbent 'promoters'[90] results in a largely non-existent market for corporate control. In addition to the *Companies Act, 1956,* regulations such as the *Securities Contracts Regulation Act of 1956, Securities and Exchange Board of India (SEBI) Act of 1992, the CICA of 1947* and *the Sick Industrial Companies Act (SICA) of 1985* also wield considerable influence.

[88] 'Dominant undertakings' are individual companies or linked organizations whose licensed capacity or output of any good (whichever was higher) was one-fourth or more of the total capacity or market (Goswami, 1996)

[89] See Ramaiya (2001) for an exhaustive account of the *Companies Act, 1956* of India.

[90] 'Promoter' is a term used often in corporate circles in India, to refer to a person, family or group that controls the company and is in charge of managing the affairs of the company.

2.5.1.4 Governance

Until the onset of the liberalization process, which began in 1991, the monitoring of corporations was severely constrained on account of a host of factors.[91] Firstly, the market for corporate control was virtually non-existent. Mergers and acquisitions were looked upon by the Monopolies and Restrictive Trade Practices (MRTP) Commission with disfavor, and there were restrictions on the acquisitions and transfer of shares. Financial institutions remained dormant and were instructed by their principal shareholder, the government, not to destabilize existing management. Secondly, a significant proportion of Indian corporations were managed by family members. Professional managers appointed at the highest echelons of the corporate hierarchy were the exception rather than the norm. This blunted the effectiveness of the managerial labor market in being an effective monitoring tool. Thirdly, prior to 1991, the domestic market in India was shielded from competition by a maze of arcane restrictions laid down by the *IDR Act of 1956* and very high import tariff barriers. This effectively forestalled any serious competition in the product market. The cumulative effect of this was that family managers remained well entrenched with hardly any accountability on their performance.

2.5.2 Recent liberalization initiatives

Liberalization entailed the repeal of *The CICA, The MPTP Act* and *The IDR Act* and significant amendments were made to the other acts resulting in a more open market ambience.[92] In addition new bodies and regulations strengthening investor protection measures and furthering the external governance measures were adopted. These include the creation of a Securities and Exchange Board of India (SEBI) along the lines of the Securities and Exchange Commission (SEC) of the United States, the setting up of depositories to facilitate speedier share transactions and mitigate fraudulent ones and the enactment of the *SEBI* (*substantial acquisition of shares and takeovers regulations) of*

[91] Some liberalization was initiated in 1984 by the Rajiv Gandhi government, but the truly path breaking measures were not put in place until 1991, when on account of an acute macro-economic crisis, a radical departure from the past was undertaken and several progressive measures were initiated by the Narasimha Rao government.

[92] *SICA, 1985* has been recently repealed (as of late 2003) and measures pertaining to corporate insolvency have been incorporated into *the Companies Act, 1956* through the insertion of a new section as a consequence of the *Companies (Amendment) Act, 2002*. In addition, the *Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, 2002* was enacted to expedite corporate insolvency problems.

1997 which resulted in the formation of extensive guidelines for takeovers and has given much needed impetus to the growth of mergers and acquisitions.[93]

The post 1991 time-period marked a dramatic shift in the institutional framework in India. Foreign capital (both direct as well as institutional/portfolio investment) leapfrogged from minuscule levels to form a substantial component of the country's total capital inflows.[94] In broad terms, foreign direct investments are permitted at a higher level of shareholding. Sector-specific guidelines for consideration of such investments by the Foreign Investment Promotion Board are stipulated in *Annexure 3 and 4 of the New Industrial Policy*.[95] These guidelines have been amended from time to time to gradually craft an increasingly open investment ambience. Without going into the specifics of the guidelines it would suffice to mention that automatic approval is granted for a holding of up to 49 percent in most sectors. However, the regulatory regime as far as foreign institutional investment is concerned can be described as more restrictive. In 2000, the shareholding of an individual foreign institutional investor is restricted to a maximum limit of 10 percent of the total issued capital in an individual firm with a cumulative foreign institutional investment limit of 24 percent. This limit can be raised in exceptional circumstances if the board of the domestic company agrees, and it is approved by the central bank, the Reserve Bank of India.

In the ensuing period, the process of financial liberalization and restructuring resulted in the state sponsored financial institutions losing their privileged access to funds from the government and being forced to tap domestic and international markets. This in turn fostered a greater sense of accountability with regard to their monitoring roles in Indian corporations. Within the firms themselves, Indian companies realized the necessity to foster professionalism in their management to remain competitive both in product and financial markets, domestically as well as internationally. This led to a new

[93] The concerned enactments in the formation the new Securities watch dog (SEBI) and the depositories are the *SEBI Act, 1992* and *Depositories Act, 1996*. SEBI is entrusted with statutory powers for protecting the interests of investors in securities, promoting the development of securities markets and regulating the securities market. Under the purview of the Depositories Act, 1996, two depositories NSDL and CDSL have been set up. (see National Stock Exchange (NSE) of India, 2000 for details).

[94] For the financial year 1990-91 total foreign direct investment (FDI) inflows constituted almost 100 million US dollars while foreign institutional investment (FII) inflows were negligible. In contrast, by 1999-00 total FDI inflows had reached 2162 million US dollars while FII inflows were 3029 million US dollars. When expressed as a percentage of India's total capital inflows the percentage of FDI and FII cumulatively has risen from 1.4 percent to 49.7 percent in the period from 1990-91 to 1999-00 (calculated from Reserve Bank of India (RBI) Annual Report of the Central Board, 2001, *Appendix Table VI.6*)

[95] See Government of India, Manual on foreign direct investment (FDI)-Policy and procedures (2003) for further details.

breed of professional managers at the helm of corporate affairs and the beginnings of a vibrant market for managerial labor. This gradual dismantling of the infamous 'license raj' and the progressive reduction in import tariffs ignited the much needed competition in the product market and exposed firms formerly used to a cocooned existence.

These path-breaking measures coupled with the opening up of India's capital markets to foreign direct and portfolio investments, and the progressive adoption of corporate governance codes have brought corporate governance issues to the forefront. Furthermore, the amendment in December 2000 of the *Companies Act of 1956* led to a further improvement in governance practices and corporate disclosure norms as evidenced in the revamped listing guidelines of the stock exchanges. The listing agreements entail quarterly filing of shareholding data, segmented reporting of business activities and the setting of audit committees on the board among others.

2.6 Summary and conclusion

This chapter has briefly introduced the various internal and external corporate governance mechanisms prevailing in different countries around the world. Internal governance mechanisms are the board of directors, large shareholders, debt holders and executive compensation schemes. External governance mechanisms include takeovers and legal and regulatory mechanisms among others. The literature pertaining to these corporate governance mechanisms was surveyed. As the focus of this dissertation is on the twin effects of ownership structure and business group-affiliation, issues relating to both of these firm specific governance characteristics were examined in greater detail. The various perspectives underlying ownership concentration differences: over regulation, investor protection and their being efficient solutions in different institutional contexts were highlighted. The effect of the impact of different levels of ownership concentration in terms of their alignment and entrenchment effects on firm performance was explained. The other important dimension contributing to ownership structure differences is heterogeneity among ownership identity or type. Commonly found ownership categories include family, institutional and corporate holdings. In addition, differences on account of their foreign or domestic nature hold relevance in many economies. These differences in ownership identity are associated with differing goals, investment horizons and capabilities of these owners.

Furthermore, the phenomenon of business groups is explained and elaborated. The possible reasons for their existence based on the intermediation and rent – seeking perspectives is highlighted, their ubiquity around the world and the differences in business group type is explained. The different controlling mechanisms employed in business groups to strengthen control by the controlling owners among firms affiliated to business groups are explored. These controlling mechanisms include the use of differential voting rights, pyramidal structures, cross-holdings and director interlocks. The nature and peculiarities of business groups prevalent in India is emphasized. Finally, a brief profile of the prevailing institutional background in India with an emphasis on the regulatory framework pertaining to the corporate sector and the recent liberalization initiatives undertaken by the government of India is presented.

It is hoped that the overview presented in this chapter has served the purpose of providing some insights into the field of corporate governance and would enable the reader to develop an appreciation of the contextual changes in India leading up to the period considered in the study for analysis. In conclusion, the chapter sets the staging ground for the detailed analysis of the various elements of ownership structure and business group-affiliation and their consequent influence on firm strategy and performance among firms in India undertaken in the subsequent chapters of this dissertation.

Appendix 2.1
Regulatory and Corporate Governance overview[96]

General

Legal origin: English Common Law

Regulations currently governing corporations: Companies Act, 1956 (and amendments); Securities Contract Regulation Act, 1956 (and amendments); Securities and Exchange Board of India Act, 1992; Depositories Act, 1996; Take-over code 1997; listing rules of various stock exchanges

Governing and enforcement bodies: Department of Company Affairs (DCA) and Registrar of Companies (ROC), Ministry of Finance; Company Law Board (CLB), Courts, and Securities and Exchange Board of India (SEBI)

Major stock exchanges: Bombay Stock Exchange (BSE) and National Stock Exchange (NSE)

Financial year: 1st April to 31st March

Company board

Board structure: Single tier with a mix of executive and non-executive directors. Directors are appointed by the shareholders at the annual general meeting. The board members are considered to hold a fiduciary position of a trustee for the company. Section 225 of the Companies Act, 1956 requires two-thirds of the board to be rotational. Of these one-third retires every year and is eligible for reappointment. Clause 49(IA) of the listing agreement with the stock exchange requires at least one-third of the directors to be independent if functions of the chairperson and CEO are decoupled and fifty percent otherwise.

Meeting frequency: At least once every three months

Multiple board memberships: Maximum permissible as per the Companies Act, 1956 is up to fifteen boards. Clause 49 of the listing agreement with stock exchanges limits the number of the number of committee (audit, nomination, compensation) chairpersonships to five and memberships to ten.

Shareholder rights

Voting rights: All shares with proportional voting rights and equal within one class (one share-one vote). Two share classes, ordinary and preference. Ordinary shares give variable dividends, possess voting rights and are traded. Preference shares give the

[96] The sketch outlined below draws heavily from the joint World Bank-IMF program of Reports on the observance of standards and codes (ROSC), April 2004. See also La Porta, Lopez de-Silanes, Shleifer, Vishny (1997); Sarkar and Sarkar (1999); Goswami (2001) and Topalova (2004)

holder the right to fixed dividends but no voting rights. Preferences shares are used minimally. Shareholders participate and vote at the annual general meting and elect directors proposed by the board. In principle, it is also possible for shareholders to propose a candidate although this is seldom practiced.

Protection: Section 397 and 398 of the Companies Act, 1956 grants shareholders the right to apply to the Company Law Board in matters pertaining to the oppression of the majority shareholders or mismanagement. One hundred shareholders or those representing 10 percent of shareholders can apply to the Company Law Board for redress. The Company Law Board is empowered to instruct management to buy out dissenting shareholders, terminate or modify agreements entered into by the company or remove/appoint directors to the board. Investors can also approach SEBI for redress.

Disclosure norms

Annual report: Companies are required to send annual report to shareholders, the stock exchange, DCA and ROC. Mandatory disclosures include director's report, profit and loss account, discussion of significant accounting policies, auditor's opinion, cash flow statements, segment accounts, ownership structure, managerial remuneration and non-executive director sitting fees among others.

Audit: Accountants certified by the Institute of Chartered Accountants of India (ICAI) must sign financial statements. Auditors are appointed at the annual general meeting and can be removed at the same meeting.

Takeover regulations

Disclosure threshold: Any person or body corporate whose shareholding crosses five percent has to disclose this to the stock exchange and SEBI. A bidder who crosses the fifteen percent threshold must make an offer for at least an additional twenty percent of the shares and deposit twenty five percent of the value of the bid in an escrow account. The minimum price for this public offer cannot be lower than the negotiated acquisition price or the highest price paid by the bidder during the last twenty-six weeks. However, 'promoter' groups having a shareholding of 10 percent and above can increase their position through the provision of a 'creeping' acquisition limit of up to 5% of share without attracting mandatory public offer requirements.

Takeover defenses: Poison pills are banned.

Corporate governance codes

Confederation of Indian Industry (CII) code on desirable Corporate Governance (1998)
Kumar Mangalam Birla committee report on Corporate Governance/Clause 49 of the listing agreement with stock exchanges (1999/2000)
Naresh Chandra committee report on corporate governance/ New Clause 49 of the listing agreement with the stock exchanges (2002)
Narayana Murthy committee report on corporate governance (2003)

The CII code is a purely voluntary code while the other codes have mandatory provisions which are implemented through Clause 49 of the listing agreement with the stock exchanges

A comparison of select corporate governance variable country ratings for India, the United States and the Netherlands [97]

	India	**USA**	**Netherlands**
Efficiency of Judicial system	8.00	10.00	10.00
Rule of Law	4.17	10.00	10.00
Corruption	4.58	8.63	10.00
Risk of expropriation	7.75	9.98	9.98
Risk of contract repudiation	6.11	9.00	9.35

Scale from zero to ten. A lower score indicates lower level of judicial efficiency, less tradition for rule of law, more corruption, higher risks associated with expropriation and higher risk of contract repudiation

Accounting standards	57	71	64

Accounting index created by examining and rating companies' annual reports on their inclusion or omission of 90 items.

Anti-director rights	5	5	2
Creditor rights	4	1	2

Scale for Anti director rights is from zero to six and for creditor rights from zero to four. Low Anti-director and creditor rights indicate inferior shareholder and creditor rights.

[97] This comparison is drawn from La Porta, Lopez de-Silanes, Shleifer, Vishny (1997)

CHAPTER 3

FOREIGN AND DOMESTIC OWNERSHIP, BUSINESS GROUPS AND FIRM PERFORMANCE: EVIDENCE FROM A LARGE EMERGING MARKET [98]

3.1 Introduction

Explaining performance differences among firms is a dominant theoretical and empirical issue in the fields of strategy and finance. Understanding how these performance differences arise and translating that into how it can be achieved is of central concern to the field (Rumelt *et al.,* 1994). In the research growing out of the industrial organization tradition, industry structure is a central determinant of firm performance (Porter, 1985). However, recent strategic management studies suggest that firm specific factors are more important in explaining the differential performance of firms (Rumelt *et al.*, 1994, McGahan and Porter, 1997). Differences among these firm specific factors are created and sustained through, among others, differing property rights, resources, organizational processes and team skills (Rumelt et *al.,* 1994). In this chapter, we examine the property rights dimension (i.e. ownership structure), the provision of scarce and inimitable resources by various shareholders and the associated institutional context in explaining differences in firm performance.

A firm's ownership structure influences its performance for several reasons. Firstly, differences in identity, concentration and resource endowments among owners determine their relative power, incentives and ability to monitor managers. Shareholdings by corporations, individuals, banks, mutual funds and governments are well-known examples of this phenomenon. Secondly, as owners have divergent goals, they have different influences on firm performance. For example, financial investors may be interested in short-term returns on their investment, while corporate investors may be more inclined towards establishing a long-term relationship.

The theoretical postulates concerning the relationship between the firm's ownership structure and firm performance put forward by Jensen and Meckling (1976) and Shleifer

[98] This chapter is the result of joint work with Sytse Douma and Rezaul Kabir and an earlier version was circulated as CentER discussion paper 2002 nr. 104. We thank Harry Barkema, Patrick Bolton, Stijn Claessens, Marc Deloof, Ravi Dharwadkar, Peter Roosenboom, Henri Servaes and participants of seminars at Tilburg University, 2002, the Conference on Securities and Financial Markets, Kaohsiung, Taiwan, 2002 and the Annual Meeting of the Academy of Management, Seattle, U.S.A., 2003 for several insightful comments and suggestions.

and Vishny (1986) were empirically tested in developed capital markets by Morck, Shleifer and Vishny (1988), McConnell and Servaes (1990), Thomsen and Pedersen (2000) and Gedajlovic and Shapiro (1998, 2002), to name a few. These studies found significant managerial, blockholder and institutional influences on firm performance.

However, in emerging and transition economies external mechanisms are less developed, and therefore, governance of listed corporations takes place mainly through internal mechanisms. Furthermore, institutional factors like family-run business groups play a distinctive role. Government controlled financial institutions are often important shareholders and have incentives and objectives quite different from those of private investors. Consequently, the effect of ownership on performance in emerging economies is likely to be different. La Porta *et al.* (1999) highlight the preponderance of blockholdings in general and familial holdings in particular among non Anglo-Saxon economies. There is a growing body of literature examining ownership structure issues from emerging economies. Qi, Wu and Zhang (2000), Claessens *et al.* (2000), Khanna and Palepu (2000a), Khanna and Rivkin (2001), Wiwattanakantang (2001), Chang and Hong (2002), Joh (2003) and Lemmon and Lins (2003) are a representative few encompassing the literature in the strategy and finance realm.

In this study, we utilize large-scale firm level data of Indian listed corporations to take a closer look at the performance impact of shareholders. The paper makes some important contributions to the extant literature. Firstly, we introduce a multi-theoretic approach to analyze the impact of ownership structure on firm performance. Using this approach enables us to generate several testable propositions on the nature of the influence of the different ownership categories on firm performance. Secondly, prior studies did not make a distinction between the two most important categories of foreign shareholders namely, foreign financial institutions and foreign industrial corporations. Since the nature of these two different classes of investors and their motivations are fundamentally different, the aggregation of them into one common class of shareholders masks certain important results which can only be determined if they are analyzed separately. Thirdly, while foreign ownership is undoubtedly an important component in the shareholding of firms in many emerging countries, it is far from being the largest block of shareholding in these countries. We find that domestic corporations, which constitute the largest proportion of shareholdings in Indian corporations, also perform a significant role. Finally, we use recent data to provide additional evidence on the influence of controlling shareholders when firms are affiliated to a business group.

Earlier studies utilized data predating several institutional and regulatory changes in India that occurred subsequent to the mid 1990s.

3.2 Theoretical underpinnings

A number of studies have examined ownership and performance relationships using agency theory as the theoretical lens. However, for firms in emerging economies, this perspective does not fully account for the diversity in the ownership-performance linkage (Hoskisson, Eden, Lau and Wright, 2000). Eisenhardt (1989) and Oliver (1997) also argue that agency theory presents a partial view of the world and advocate merging agency and resource-based theories with institutional theory. In view of this, we take recourse to embrace a multi-theoretic approach by incorporating elements of agency theory, resource-based theory and institutional theory. Combining these various perspectives yields a richer and more composite understanding of the influence of various shareholders in determining firm performance especially among emerging economies. Several recent studies (e.g. Hillman and Dalziel, 2003; Lynall, Golden, and Hillman, 2003) have usefully employed a multi-theoretic approach to examine a wide array of governance issues.

3.2.1 Agency theory

Agency theory concerns itself with problems that arise when the desires of the principal and the agent conflict with each other and when it is difficult or expensive for the principal to verify what the agent is actually doing (Eisenhardt, 1989). This feature allows corporate managers to pursue their own interests at the expense of shareholders. Managers who disregard shareholder interests may be ousted by powerful shareholders or by a hostile takeover. This presupposes that shareholders have an interest to indulge in monitoring managerial behavior. However, shareholders differ with respect to incentives to spend resources on monitoring. Shareholders owning a miniscule proportion of shares of a firm have very little incentive to devote the necessary time and effort on voicing their view on account of free riding from other shareholders.

Dharwadkar *et al.* (2000) argue that firms in emerging economies are especially characterized by unique agency problems arising from *principal - principal* goal incongruence. This is in addition to the traditional agency problems based upon *principal - agent* goal incongruence as observed in many Anglo-Saxon economies. The *principal - principal* goal incongruence in emerging economy firms stems from

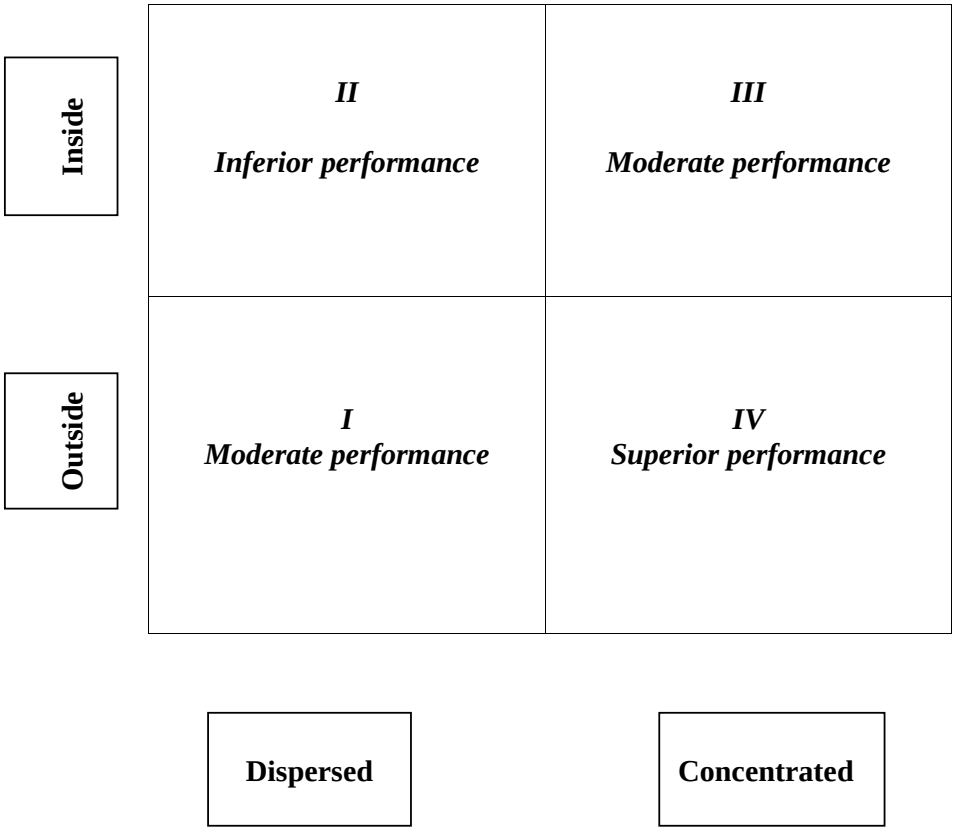
expropriation within weak governance contexts when large or majority owners assume control of the firm and deprive minority owners the right to appropriate returns on their investments (Claessens *et al.*, 2000; Lemmon and Lins, 2003).[99]

The impact on firm performance of various ownership categories taking into account both traditional and unique agency issues is outlined in *Figure 3.1*. Using the twin dimensions of ownership identity and ownership magnitude as proposed by Dharwadkar *et al.* (2000), we postulate the impact in four different quadrants. ***Quadrant I*** represents *dispersed - outside* shareholders whose impact on performance is postulated to be moderate because their ability to effectively monitor is limited by higher coordination costs and information asymmetry problems (Coffee, 1991; Black, 1998). ***Quadrant II*** represents *dispersed - inside* shareholders who embody the worst of both worlds. Being inside and dispersed distorts their incentive structures and compromises their ability to undertake an effective monitoring exercise[100] (Claessens *et al.,* 2000; Sarkar and Sarkar, 2000; Khanna and Palepu, 2000b). Consequently, their impact on performance is predicted to be inferior. ***Quadrant III*** represents *concentrated - inside* ownership. While more concentrated holding results in a stronger incentive to efficiently manage the affairs of a firm, it provides opportunities and the means for expropriation of minority shareholders (Bebchuk, *et al.*, 2000; Claessens *et al.*, 2000; Wiwattanakantang, 2001; Joh, 2003; Lemmon and Lins, 2003). Therefore, the impact on performance is envisaged to be moderate. Finally, ***Quadrant IV*** depicts *concentrated - outside* shareholdings whose impact on firm performance is postulated to be superior as these shareholders are capable of mitigating the expropriation of minority shareholders while at the same time maximizing the benefits of risk bearing, incentive alignment and monitoring (Shleifer and Vishny, 1986; Chibber and Majumdar, 1999; Dharwadkar *et al.*, 2000; Allen and Philips, 2000).

[99] Please also refer to *Figure 2.1*

[100] Dispersed - outside and dispersed - inside shareholders are akin to *pressure - resistant* and *pressure - sensitive* shareholders respectively as per the categorization formulated by Brickely *et al.* (1988)

Figure 3.1
Ownership – performance relationship among emerging economy firms viewed from agency theory



3.2.2 Resource-based theory

According to the resource-based theory, a firm's competitive advantage is based on the possession of tangible and intangible resources, which are difficult or costly for other firms to obtain. In order to sustain the firm's competitive advantage these resources must be valuable, rare, inimitable and unsubstitutable (Barney, 1991). A major contribution of resource-based theory is that it explains long-lived differences in firm profitability that cannot be attributed to differences in industry conditions (Peteraf, 1993). It can be argued that considerable resource heterogeneity exists among various shareholder categories. For emerging economy firms, these differences arise from shareholders being either foreign or domestic and financial or strategic. The impact on firm performance of these owners with diverse resource endowments is expected to

differ as a consequence of this heterogeneity in resources and organizational capabilities. We shall now exemplify the impact on firm performance of various shareholders.

Financial - foreign shareholders are endowed with good monitoring capabilities, but their financial focus and emphasis on liquidity results in them unwilling to commit to a long-term relationship with the firm and to engage in a process of restructuring in case of poor performance. These shareholders prefer strategies of exit rather than voice to monitor management (Coffee, 1991; Aguilera and Jackson, 2003). Consequently, *financial - foreign* shareholders are postulated to have a moderate impact on firm performance. *Financial - domestic* shareholders possess characteristics that represent the worst of both worlds. Their financial focus leads to short-term behavior and a preference for liquid stocks while their domestic affiliation often results in a complex web of business relationship with the firm and other domestic shareholders (Claessens *et al*., 2000; Dharwadkar *et al*., 2000). Therefore, these shareholders are expected to have a negative influence on firm performance.

On the other hand, there are domestic and foreign shareholders who possess strategic interests because their ownership stakes are motivated by non-financial goals, such as obtaining control rights and developing sustainable competitive advantages and capabilities (Aguilera and Jackson, 2003). *Strategic – foreign* shareholders use their ownership stakes as a means to foster their strategic interests, which involve securing access to new markets, location specific resources and low cost production facilities. Their foreign affiliation also gives domestic firms relatively easy access to superior technical, managerial and financial resources (Chibber and Majumdar, 1999). Therefore, their impact on firm performance is projected to be superior. *Strategic – domestic* owners exercise property rights as a means to pursue the strategic interests of their organizations which include regulating competition between firms, underwriting relational contracts, securing new markets etc. (Aguilera and Jackson, 2003). However, their impact on firm performance is anticipated to be moderate because, in comparison to *strategic - foreign* shareholders, they have relatively inferior resource endowments and capabilities.

3.2.3 Institutional theory

While agency theory and the resource-based theory are powerful tools and provide important insights in examining the impact of ownership on firm performance, they

suffer from the serious limitation that these two perspectives do not examine the social context within which the firm's activities are embedded. Institutional theory has the potential to address this important lacuna by introducing the social and regulatory context in influencing organizational structure and firm behavior. Thomsen and Pedersen (2000) in their study on large European corporations argue that both ownership concentration and identity are embedded in national institutions and these have to be taken into account when accessing implications for corporate strategy and performance.

Institutional theory emphasizes the influence of socio-cultural norms, beliefs and values, regulatory and judicial systems on organizational structure and behavior. Institutions regulate economic activities through formal and informal rules as a basis for production, exchange and distribution (North, 1990). In addition to these features, emerging economies are characterized by greater imperfections in the markets for capital, products and managerial talent. These lead to so called 'institutional voids' - a situation when specialized intermediaries which typically provide these services in developed economies are absent (Khanna and Palepu, 2000b). It presents an opportunity for some firms, which have the necessary resources and capabilities to bridge these institutional voids. Business groups are particularly well suited to provide the necessary welfare enhancing functions to plug these institutional voids because of their superior ability to raise capital, train and rotate managerial talent among group firms and use common brand names in marketing their products. On the downside, though, some of these institutional voids and ineffective protection of minority shareholder and creditor rights lead to greater entrenchment by controlling shareholders resulting in conditions ideally suited for expropriation of disadvantaged stakeholders.

3.2.4 Multi-theoretic perspective

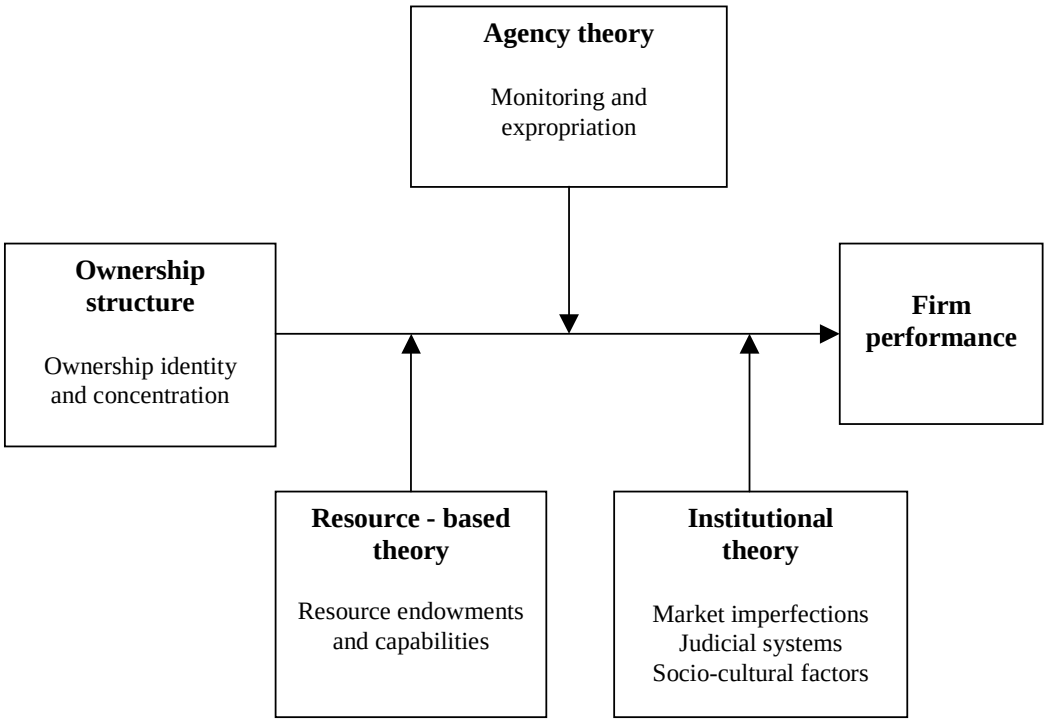
In view of the afore mentioned inadequacies of a unitary perspective, we adopt a multi-theoretic view in this paper by taking recourse to elements of agency, resource-based and institutional theories to formulate a more holistic perspective in examining the impact of ownership structure on firm performance. *Figure 3.2* presents this multi-theoretic approach by summarizing the key elements.

Combining the agency, resource-based and institutional theories reveals the differing influences of various categories of shareholders among emerging economy firms. Broadly, they indicate that there exists a positive reinforcing effect on firm

performance if the shareholder is outside, concentrated, foreign and has strategic resources. On the other hand, at the opposite end of the spectrum, there are negative reinforcing effects if the shareholder is inside, dispersed, domestic and has financial interests. The reinforcing effects are accentuated further when the agency and resource-based characteristics of these shareholders are embedded in emerging economy institutional settings.

With regard to shareholders with some other combinations of ownership traits, agency and resource-based effects tend to counteract each other. For instance, inside, concentrated, domestic shareholders with strategic interests are resource rich from the resource-based perspective but are subject to incentive distortions when viewed from the agency framework. On the other hand, outside, dispersed, foreign shareholders with a financial focus tend be resource poor from the resource based perspective but have relatively more aligned interests from an agency perspective.

Figure 3.2
Multi-theoretic approach in explaining ownership – performance relationship among firms in an emerging economy context



3.3 Hypotheses

3.3.1 Foreign ownership

It is important to disentangle the effects of foreign ownership in a firm belonging to foreign industrial corporations and foreign financial institutions. Agency theory suggests that since foreign corporate ownership stakes are larger and less fragmented than stakes held by foreign institutional shareholders, the incentives of these larger shareholders are more aligned to perform an effective monitoring role. Foreign corporations holding an ownership stake in a domestic company also tend to invest in firms related to their core business. For example, Honda is much more likely to invest in a transport company than in a brewery.

Thus, foreign corporations will have relevant experience and know how enabling it to 'benchmark' the performance of an Indian company relative to the performance of other companies in other markets wherein the foreign corporation holds a stake. The nature of such a relationship typically goes beyond financial contributions and extends to provision of managerial expertise and technical collaborations. The provision of such valuable expertise is characteristic of the resource-based perspective, which suggests that heterogeneity in resource capabilities of different owners will lead to a differential impact on firm performance. Companies with foreign corporate shareholdings are endowed with superior technical, organizational and financial resources. For instance, Chibber and Majumdar, (1999) find that the extent of a foreign firm's control over a domestic firm is positively associated with the degree of resource commitment to technology transfer. Djankov and Hoekman (2000) find foreign investment to be associated with the provision of generic knowledge (management skills and quality systems) and specific knowledge (which cannot be transferred at arm's length). Furthermore, a study conducted by Dhar (1988) on foreign controlled companies in India finds that most of these enterprises have business links beyond mere equity participation. They have technical collaborations, nominations of foreign directors on their boards, consultancy and marketing arrangements, trademarks, patent obligations and managerial resource sharing.[101]

[101] See *Appendix 3.2* for some anecdotal evidence pertaining to specific companies in India.

The sustainability of these advantages though, is often linked to the institutional context. As a consequence of imperfections in capital, labor and technological markets, foreign shareholders are, relative to domestic shareholders, in a better position to exploit their relative advantages to influence firm performance positively (see Chibber and Majumdar, 1999; Khanna and Palepu, 2000a and Sarkar and Sarkar, 2000). Furthermore, countries with stronger shareholder rights and judicial systems and a higher level of economic development attract higher levels of foreign capital (Aggrarwal *et al.*, 2003). Governments also stimulate investments made by foreign corporations by providing various incentives. These incentives are an example of how the institutional context can influence the firm's ownership structure and the provision of specialized resources.

Relating these arguments to the multi-theoretic approach developed in the previous section we can characterize these foreign corporate holdings as *concentrated - outside* and *strategic - foreign* from agency and resource-based theories respectively. Merging these perspectives leads to a strong positive influence on firm performance:

H1a: Foreign corporate ownership positively affects firm performance.

Foreign financial institutional investors, on the other hand, can behave in a manner that is significantly different from foreign corporate investors (see Wilkins (1999) for an extensive discussion on the differences between foreign institutional investors characterized as foreign portfolio investment and foreign corporate investors characterized as foreign direct investment). In the case of foreign financial institutions, decisions to buy and sell shares of domestic firms are made by fund managers, whose performance is measured by comparing their results with a stock market index and/or with competing institutions of a similar class. These institutions have different investment horizons and are primarily oriented towards stock market based measures of performance. They have the requisite incentives to sell their stakes unless a firm can maintain short-term capital market gains. Foreign fund managers also manage a portfolio of a large number of investments in different industries to obtain the benefits associated with a diversified portfolio of investments. Furthermore, the ownership stake of a single foreign institutional investor as well as foreign institutional investors as a class in a single Indian firm is legally constrained. Consequently, they hold extremely fragmented stakes. These shareholders are thus representative of the *dispersed - outside* category of shareholders as viewed from an agency perspective. Foreign institutional

investors, each holding only very small stakes, are unlikely to act as a cohesive block in enhancing corporate performance. Moreover, they tend to select investments in companies, which are large, familiar and actively traded (Kang and Stulz, 1997), and which are covered by mass media (Falkenstein, 1996). If foreign institutional investors are dissatisfied with a company's share performance they have the relatively easy option to sell their ownership stake. [102] As a result, the foreign fund manager is much more likely to sell the shares of an under performing company than to invest time and energy to institute a process of corporate restructuring. These features are characteristic of *financial - foreign* shareholders as viewed from a resource-based perspective. Combining these perspectives yields:

H1b: Foreign financial institutional ownership is positively associated with stock market-based measures of firm performance only.

3.3.2 Domestic ownership

In many emerging countries, domestic corporations are among the largest group of blockholders (Claessens *et al*., 2000). In Indian listed firms they also constitute the largest category of shareholders. These blockholders usually have a long investment horizon. Allen and Phillips (2000) present evidence that supports the argument that corporate ownership provides significant benefits to firms involved in certain business agreements by reducing the costs of monitoring the alliances or ventures between firms and their corporate blockholders. Furthermore, in response to the greater competitive and liberalized environment in India since the mid 1990s, a number of companies have begun the process of acquiring strategic stakes in other companies in an effort to enhance and sustain the domain of their core competence. Thus their monitoring incentives as well as their abilities are substantially greater than those of domestic financial institutions. These domestic corporate holdings thus share the features of *concentrated - inside/outside* holdings (depending on group affiliation) from an agency perspective and are characterized as *strategic - domestic* shareholders from a resource-

[102] In a study on institutional investors in India, Mohanty (2003) states that one of the fund managers told him that "… what matters to me is the money that I can make from the company and not the governance structure in the company. ....If I am making money I am happy with it." Mohanty further states that "…two fund mangers told me that if we look at corporate governance alone, then the value of our portfolio might fall …" Furthermore, according to him, the fund managers have a performance evaluation system, which is entirely based on the performance of the funds they create and manage. Hence if a company with a poor corporate governance record is expected to give a higher return, then the fund manager can very well invest there. In his empirical analysis, Mohanty finds that institutional investors have invested in companies with good governance records but he does not find any effect of the ownership stake of these investors on the governance of these companies.

based perspective. Provided the institutional context in terms of legal regulations is favorable, the presence of large corporate shareholders also increases the likelihood that a firm is taken over. These domestic corporations are therefore likely to have both the incentives and the skills to act as good monitors according to the agency, resource-based and institutional perspectives:

H2a: Domestic corporate ownership positively affects firm performance.

Domestic financial institutions form a significant chunk of the total shareholding of Indian firms, and consist of development financial institutions, insurance companies, banks and mutual funds. The common thread among all of these disparate domestic financial institutions is that they are predominantly government owned. Government ownership is plagued by a number of problems, which reduces their monitoring potential significantly. Firstly, the government's nominees on the board are typically bureaucrats with minimal expertise in corporate matters. This fits in with the characteristics of *financial - domestic* shareholders from the resource-based perspective. Secondly, even if these agents of the government are equipped for the task of oversight in corporate matters they do not have a strong incentive to be effective monitors as their tenure and career prospects are rarely affected by the performance of the companies in which they serve on the board as nominees. Moreover, as many of the prominent business families have links with the political elite who in turn possess substantial clout over the functioning of these predominantly government owned institutions, the nominees tend to invariably side with the management. These are the agency costs associated with a lack of incentive alignment and are a feature of *dispersed - inside* holdings. Thirdly, since governments especially in developing economies, espouse significant social welfare objectives, they are less profit driven and hence less vigilant in their monitoring role (Ramaswamy, Li, and Veliyath, 2002). Due to the nexus between the business families and the ruling elite, these government controlled financial institutions are at times forced to purchase stocks of under performing firms to bail them out in times of financial crisis. This demonstrates how the institutional context in which firms are embedded influences the behavior of these shareholders. Combining the agency, resource-based and institutional perspectives results in strong negative reinforcing effects. It can therefore be reasonably assumed that these domestic financial institutions bring to bear a detrimental effect on firm performance:

H2b: Domestic financial institutional ownership negatively affects firm performance.

Jensen and Meckling (1976) postulate that ownership by managers leads to 'reduced on the job consumption'. In view of the preponderance of family based firms in emerging markets in general, and India in particular, this postulate assumes more significance. Owner managers have a strong incentive to manage their companies well and generate wealth as their fortunes are tied to the well being of the company. They are after all the promoters of the company and they have the greatest stakes (in tangible as well as in intangible terms) in the success and failure of their companies. However, beyond a particular threshold level of owner manager holding, the positive alignment effects are likely to be mitigated by entrenchment effects. For instance, Schulze *et al*. (2001) find that altruistic tendencies among family members can create a sense of entitlement by encouraging them to use the firm's resources as employment perquisites and other privileges. In a weak institutional context these tendencies tend to get exacerbated. A number of studies have documented such a curvilinear relationship between owner manager holdings and firm performance (e.g. McConnell and Servaes, 1990). Thus, from agency and resource-based perspectives, we formulate the following hypothesis with respect to shareholdings of owner managers, which are *concentrated - inside* and *strategic - domestic* in character:

H2c: Ownership by owner managers positively affects firm performance up to a particular threshold level beyond which increased levels of ownership negatively affect firm performance

3.3.3 Domestic ownership and business group-affiliation[103]

Business groups consist of a collection of firms, which are linked together by common ownership, and director interlocks. Group affiliation has both benefits and costs. Among the beneficial effects, Chang and Hong (2000) find that group companies serve as an organizational structure for appropriating quasi rents, which accrue from access to scarce and imperfectly marketed inputs such as capital and information. Khanna and Rivkin (2001) report that groups can boost the profitability of member firms as they fill the voids left by the missing institutions that normally underpin the efficient functioning of product, capital and labor markets. However, groups are also associated with the larger possibility of (i) inefficient transfer of resources from more profitable firms to financially constrained firms (Shin and Park, 1999) and (ii) exploitation of minority shareholders by means of tunneling of resources through

[103] Please refer to *Chapter 2* for more details on business groups.

pyramids and extensive crossholdings by the controlling family (Johnson *et al.,* 2000, Bertrand *et al.,* 2002).[104]

In many Indian business groups, domestic corporate holding is used primarily as a mechanism to expropriate wealth of other minority shareholders**.** These shareholdings serve as the primary vehicle to tunnel resources at the expense of minority shareholders and facilitate intra-group resource transfers. The controlling shareholders therefore use these shareholdings to further their own interests. In such a scenario, domestic corporate holding affiliated to a group would mitigate the monitoring efforts of other shareholders and would abet controlling shareholders in their efforts to exercise private benefits of control. This is consistent with the characteristic of these shareholders being *concentrated – inside* shareholdings as viewed from agency theory. While resource - based theory suggests that these shareholders posses traits of being *strategic - domestic* shareholders, being inside shareholders, they lack the positive reinforcing effects which non-group domestic corporate holdings possess. Consequently, we expect the negative agency effects to dominate:

H3a: Domestic corporate ownership in group firms will result in lower firm performance than domestic corporate ownership in non-group firms

Consistent with the earlier argument for a negative influence of corporate ownership within groups, owner managers belonging to group companies can also exert a negative influence. Their stock holdings can mitigate monitoring efforts by other shareholders because in group firms domestic corporations and group directors could act in consort to expropriate wealth. Owner managers in group-firms may also pursue non-profit maximizing objectives that increase their private benefits. In effect, while owner managers among group firms are generally endowed with greater levels of resource rich features such as board capital (human and relational) as viewed from a resource-based perspective *vis à vis* non-group firms (being *strategic - domestic* shareholders), in a weak institutional setting these positive effects are considerably attenuated by the higher agency costs (due to greater levels of *principal – principal* goal incongruency) associated with owner managers belonging to groups. We therefore expect the negative effects to dominate at all levels of ownership:

[104] Bebchuk *et al.* (2000) describe the means by which pyramids and cross holding structures enable one shareholder to maintain complete control of a firm while holding less than a majority of the cash flow rights

H3b: Ownership by owner managers in group firms will result in lower firm performance than ownership by owner managers in non-group firms.

3.4 Methodology

In line with prior studies that examine the relationship between ownership and firm performance (e.g. Gedajlovic and Shapiro, 1998; Thomsen and Pedersen, 2000; Khanna and Palepu, 2000a), we use the following regression specification:

Performance = f (ownership variables, control variables)

The specification uses corporate performance as measured by ROA and Q as the dependent variable. Different categories of ownership variables such as foreign and domestic corporations, foreign and domestic financial institutions, and directors and relatives are used as explanatory variables. This basic specification is estimated using a variety of regression models. As a robustness check we also use censored regression specifications wherein the left and right censoring values are the relevant caps of the two performance variables at the 1 percent and 99 percent level.

Arguably, the above specification could potentially suffer from reverse causality, a phenomenon wherein ownership is influenced by firm performance rather than the other way around. However, this is unlikely to be a serious problem in this study because of the fact that the major categories of shareholdings in India have remained relatively stable over time.[105] In a similar vein, Thomsen and Pedersen (2000) in their study examining the impact of ownership structure on firm performance find equity ownership to be characterized by structural stability, which makes it reasonable to regard ownership structure as an exogenous variable.

[105] This is primarily due to the fact that despite the institution of a takeover code in 1994, there have been relatively few takeovers in the period leading up to 2000. Large block trades among corporate shareholders are unusual and trading is largely confined to institutional shareholders. Among these institutional investors, foreign institutional investors are the most active traders but they constitute only a small minority of the shareholding among most Indian firms. A comparison of our broad shareholding categories with prior studies further attests to overall stability of these ownership categories.

3.5 Data

The data for the study are collected from a publicly available database named 'Capitaline 2000' maintained by Capital Market Publishers India Pvt. Ltd. The database contains financial, shareholding, annual reports and other information filed with regulatory agencies of a large number of companies. In order to select the final sample, we adopt the following criteria. First, we identify the year for which the database reports the maximum number of firms with financial and shareholding information. Second, we restrict our analysis to firms listed on the Bombay Stock Exchange (BSE), which is the oldest, and one of the two main stock exchanges operating in India (the other one is the National Stock Exchange). This is because the reliability of data pertaining to performance and share ownership is better with regard to listed firms. Almost all published studies related to India use the BSE listing as a basis to construct their samples. It enables us to compare the results of this study with those of previous studies. Third, following the convention adopted by studies of this nature, we eliminate financial, utility, real estate, trading and Government firms (defined as firm with a total government holding of 50 percent and more) from our sample. Fourth, as our study relates to Indian corporations, we drop firms, which have a total foreign shareholding component of fifty percent and above. This eliminates subsidiaries of foreign firms. Finally, we drop a few more firms on account of a lack of information on some of the variables required for analysis and due to suspicion of typographic errors being present in some of the observations. This exercise leads to final sample size of 1005 firms belonging to the financial year 1999-2000. Many different industries are represented in the sample. With regard to the problem pertaining to outliers, which is common to an empirical analysis using financial statement data, instead of dropping them from the sample, we cap the performance variables at their 1^{st} and 99^{th} percentile values.

3.6 Definition of variables

As stated earlier, we use ROA and Q as measures of firm performance. In line with similar studies of this nature, ROA is defined as the operating earnings before interest, depreciation and taxes over the book value of total assets. Q is defined as the sum of the market value of equity and book value of debt divided by the book value of assets.[106] A

[106] As a robustness check we also use the market to book value ratio (M/B), which is defined as the market value of equity over the book value of equity. However, as the M/B ratio is substantially correlated with the Q and the empirical results do not change qualitatively, we do not report these results separately.

description of these and other variables used in this study is presented in *Appendix 3.1*. Descriptive statistics on the performance measures of sample firms are presented in *Table 3.1a.*

Table 3.1a
Descriptive statistics

The sample consists of 1005 Indian firms (defined as having a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed. All variables are as defined in *Appendix 3.1.*

Performance measures

Performance measure	Mean	Median	Maximum	Minimum	Standard Deviation
ROA (%)	12.69	13.29	51.00	-35.00	12.88
Q	1.30	0.80	10.80	0.23	1.59

Explanatory variables

The most important explanatory variables used in the study are ownership variables. At first, we make a broad distinction between foreign shareholders and domestic shareholders. The variables representing these shareholdings are denoted as FOR and DOM. Since the purpose of this study is to examine the influence of ownership at a disaggregated level, we split the broad ownership variables into important categories. We calculate the percentage of common shares held by foreign institutional investors and identify the variable as FORI. Although, on average, they account only for a small percentage of the shares of Indian listed corporations *(see Table 3.1b)*[107], they account for a substantial proportion of the daily stock turnover of large and liquid stocks on the stock exchange, and are seen as significant drivers of market sentiment.[108] The variable

[107] In our sample, 327 firms have shareholding by foreign financial institutions. The mean (median) value of this sub- sample is 3.59 (0.64) percent.

[108] While as of January 2000, foreign institutional investors constituted barely 5 percent of the market capitalization, they account for 50 percent of the 'free float' (shares that are actually publicly available for trading) in most big stocks. (see Banaji, 2000).

FORC refers to the percentage of common shares held by foreign corporations. We observe that a single firm almost always holds the shares belonging to this category. These shareholdings are primarily foreign collaborator holdings. As a consequence, these holdings do not represent mere financial investments in companies, but substantial technical and managerial collaborations with Indian firms. The average FORC in the sample is larger than that of the FORI (see *Table 3.1b*). Although, only a limited number of Indian firms (138) have foreign corporations as shareholders, the average stake held by these foreign corporations in this sub-sample is substantial (17.83 percent).

The variable DOMI refers to the percentage of common shares owned by domestic (i.e. Indian) financial institutions. The variable DOMC refers to the percentage of common shares held by domestic Indian corporations. This is the largest component of equity ownership in Indian listed firms (see *Table 3.1b*). We also construct another ownership variable DIR, which represents the percentage of common shares, owned by all directors (including relatives). It is the second largest category of owners in Indian listed firms (see *Table 3.1b*).

Table 3.1b
Descriptive statistics

The sample consists of 1005 Indian firms (defined as having a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed. All variables are as defined in *Appendix 3.1.*

Ownership variables

Ownership variables (%)	Mean	Median	Maximum	Minimum	Standard Deviation
FORI	1.17	0.00	44.80	0.00	3.96
FORC	2.45	0.00	48.99	0.00	7.86
FOR	3.62	0.00	49.00	0.00	8.88
DOMI	7.13	2.56	66.19	0.00	9.77
DOMC	28.47	25.74	100.00	0.00	21.38
DOM	35.60	33.41	100.00	0.00	24.02
DIR	17.28	10.87	91.20	0.00	18.97

[109] An independent check on group affiliation conducted by us of 100 large Indian corporations has revealed that these affiliations are accurate. Furthermore, to assess the time stability of these groupings we looked at the 1995 ranking of the Financial Express (FE) 500 (a local business publication) listing of largest 500 Indian firms and were able to find consistent group affiliations for the firms listed in the FE500 and those present in our sample.

In order to identify corporate and family ownership belonging to group firms, we use the classification made by the database itself. It determines group affiliation from a variety of sources including public announcements made by individual corporations and groups, regulatory filings and stock exchange listings by corporations.[109] There are 600 non-group firms and 405 group firms in our sample.[110] Group affiliation information is then used to construct our two interaction variables, DOMC*Group (which represents domestic corporate ownership in firms affiliated to groups) and DIR*Group (representing director and other family member ownership in firms affiliated to groups). These interaction variables are employed in the regression specification to examine the influence of these ownership categories on firm performance when they belong to business groups.

Control variables

The two principal control variables we use are Sales and Age. Sales is a proxy for the size of a firm. Size of a firm can have a significant influence on firm performance and a proxy for firm size is used in almost all studies explaining firm performance. Age is also considered to be an important determinant of firm performance. Older firms are more experienced, receive the benefits of learning and are associated with first mover advantages. However, older firms are also arguably prone to inertia and are less flexible in their ability to adapt to competitive pressures. Summary statistics of these two control variables are presented in *Table 3.1c*.

[110] The proportion of group firms in our sample is 40 percent, which is exactly same as the proportion of group firms in India reported by Lins and Servaes (2002) and Bertrand *et al.* (2002)

Table 3.1c
Descriptive statistics

The sample consists of 1005 Indian firms (defined as having a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed. All variables are as defined in *Appendix 3.1.*

Key firm characteristics

Firm variables	Mean	Median	Maximum	Minimum	Standard Deviation
Sales (millions of Rupees)	2,323.00	590.00	158,472.00	1.00	7,926.00
Age (years)	23	16	121	2	17

We also adjust for business group affiliation with a group dummy and for industry factors because differences on these dimensions can influence the relative performance of firms. Although the database has its own classification of industries, in order to make the classification more amenable to that of previous studies, we have recoded these industries into their closest two-digit Standard Industrial Classification (SIC) equivalents. In total, the sample firms are distributed over 22 different two digit SIC code industries, which form the basis for industry dummies, used in the regression analysis. The empirical analysis controls for all these factors. Details pertaining to industry distribution are depicted in *Table 3.2*

Table 3.2
Sample industry distribution

The sample consists of 607 (350 non-group and 257 group) Indian firms (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed. Industries are classified on the basis of the US Standard Industrial Classification (SIC) system.

Industry	Number of firms	Percentage of sample
Manufacturing (SIC 35 and 39)	214	21.29
Chemical and allied products (SIC 28)	193	19.20
Textile Mill products (SIC 22)	134	13.33
Electric and other electronic equipment (SIC 36)	75	7.46
Primary Metal Industries (SIC 33)	78	7.76
Food and Kindred products (SIC 20)	62	6.17
Transportation Equipment (SIC 37)	50	4.96
Services (SIC 70, 73, 78 and 80)	69	6.87
Paper (SIC 26)	41	4.08
Stone, Clay and Glass products (SIC 32)	30	2.99
Metal and Mining, Oil and Gas extraction and Petroleum and Coal products (SIC 10, 13, 29)	23	2.29
Rubber and Miscellaneous plastic products (SIC 30)	14	1.39
Leather and leather products (SIC 31)	11	1.09
Non-metallic minerals (SIC 14)	6	0.60
Agriculture (SIC 01, 02, 07, 08 and 09)	5	0.50
Total	1005	100

Correlation statistics for variables used in the analysis are depicted in *Table 3.3*

Table 3.3
Pearson correlation matrix

The sample consists of 1005 Indian firms (defined as having a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed. Group is dummy variable representing business group membership. It is coded as one for group-affiliated firms and zero otherwise. All other variables are as defined in *Appendix 3.1*.

Variable	*FORI*	*FORC*	*FOR*	*DOMI*	*DOMC*	*DOM*	*DIR*	*Log Sales*	*Log Age*	*ROA*	*Q*
FORI	1										
FORC	0.02	1									
FOR	0.46	0.90	1								
DOMI	0.12	-0.01	0.04	1							
DOMC	0.01	-0.05	-0.04	0.06	1						
DOM	0.06	-0.05	-0.02	0.46	0.92	1					
DIR	-0.14	-0.16	-0.20	-0.3	-0.49	-0.56	1				
Log Sales	0.23	-0.02	0.16	0.38	0.29	0.39	-0.22	1			
Log Age	0.09	0.02	0.06	0.37	0.21	0.30	-0.17	0.46	1		
ROA	0.08	0.10	0.13	-0.02	0.07	0.06	0.07	0.37	0.11	1	
Q	0.22	0.04	0.13	-0.03	0.02	0.00	-0.00	-0.03	-0.16	0.11	1
Group	0.14	0.04	0.10	0.27	0.37	0.39	-0.41	0.41	0.31	0.03	-0.09

All correlations equal to or greater than 0.07 are significant at the 5 percent level

3.7 Results and discussion

The results of regression analysis are presented in *Table 3.4a* and *Table 3.4b.* In all regression specifications, we include industry dummies to take into account any industry-specific factors that could affect firm performance. These coefficient estimates are not reported for the sake of brevity. The regression result of the base model consisting of only control variables is presented in *Model (1).* The next column represents the results of introducing the ownership variables into the regression specification. This depicted in *Model (2).* We observe that the coefficient of foreign ownership (FOR) is positive and statistically significant. This result is consistent regardless of whether the performance measure is ROA (*Table 3.4a*) or Q (*Table 3.4b*). The finding suggests that foreign ownership positively affects firm performance, and is consistent with that of prior studies.

Table 3.4a
Firm performance measured by ROA

This table presents the results of OLS regressions of firm performance on ownership and firm specific control variables. The sample consists of 1005 Indian firms (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed. Return on Assets (ROA) is defined as the operating profit before depreciation, taxes, interest and other amortization charges over total assets. ROA is winsorized at the 1 percent and 99 percent levels. Group is dummy variable representing business group membership. It is coded as one for group-affiliated firms and zero otherwise. All other variables are defined in *Appendix 3.1*. The regressions are corrected for heteroskedasticity using White heteroskedasticity-consistent standard errors and covariance. Industry dummies and an intercept term are included in each regression but their coefficients are not reported. The asterisks ***, ** and, * denote statistical significance at 1 percent, 5 percent, and 10 percent levels, respectively.

Explanatory variables	(1)	(2)	(3)	(4)	(5)
FORI			-0.016		-0.002
FORC			0.137**		0.133**
FOR		0.107**		0.106**	
DOMI				-0.154***	-0.153***
DOMC				0.042*	0.041*
DOM		0.019	0.018		
DIR		0.143**	0.144**	0.125**	0.127**
DIR^2		-0.001	-0.001	-0.001	-0.001
Log Sales	3.174***	3.115***	3.169***	3.276***	3.321***
Log Age	-0.974	-0.953	-0.935	-0.0384	-0.374
Group	-4.118***	-2.885***	-2.807***	-2.958***	-2.889***
Adjusted R^2	0.187	0.201	0.202	0.216	0.217
F-statistic	10.246***	9.714***	9.467***	10.224***	9.951***

We now disaggregate foreign ownership into its two main components. *Models (3)* and *(5)* in *Tables 3.4a* and *3.4b* provide the results. When foreign ownership is broken up into those relating to foreign corporations (FORC) and those pertaining to foreign institutions (FORI), an interesting picture emerges: the variable representing ownership by foreign corporations (FORC) is positive and significant, while ownership by foreign financial institutions (FORI) is not significant (*Model (3)* of *Table 3.4a*). The same results are obtained in *Model (5)* of *Table 3.4a*, where we disaggregate domestic ownership into domestic institutional and domestic corporate ownerships.

When Q is used as the performance variable *(Models (3)* and *(5)* in *Table 3.4b)*, we find that both foreign corporations (FORC) and foreign institutional investors (FORI) variable are positive and significant. We also observe that the regression coefficient of FORI (0.076) is considerably larger than that of FORC (0.014). It indicates that foreign institutional owners have a larger impact than foreign corporate owners when performance is measured using stock market valuation criterion. The significant positive relationship of foreign institutions with Q as performance variable may indicate that these institutions are either 'tracking' better performing firms or 'cherry picking' them (i.e. investing in firms that offer superior market returns).[111] Our empirical results are consistent with hypothesis *H1a* and *H1b*.

The low and dispersed shareholdings of foreign institutions compared to foreign corporations suggests that foreign institutions are unlikely to be in a position to monitor and significantly influence the operating performance of these companies. For foreign corporations, whose average shareholdings are substantially larger, the incentives and rewards to monitor, their resource endowments and capabilities and the degree of commitment are higher. Since foreign corporations provide an integrated package of capital, management and technology that is less easily or efficiently assembled piecemeal (Chhibber and Majumdar, 1999), their positive impact is captured in both the ROA and Q regressions.

[111] Foreign institutional investors usually 'track' firms that have a high probability of improving their market value. When a tracked firm implements improvements, its market value rises because the improvements have been realized (Yeung, 2000). Here these foreign investors' contribution has been merely to 'track' firms with high probability of improving market value and investing in them.

Table 3.4b
Firm performance measured by Q

This table presents the results of OLS regressions of firm performance on ownership and firm specific control variables. The sample consists of 1005 Indian firms (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed. Q is defined as the sum of the market value of equity and the book value of debt over total assets. Q is winsorized at the 1 percent and 99 percent levels. Group is dummy variable representing business group membership. It is coded as one for group-affiliated firms and zero otherwise. All other variables are defined in *Appendix 3.1*. The regressions are corrected for heteroskedasticity using White heteroskedasticity-consistent standard errors and covariance. Industry dummies and an intercept are included in each regression but their coefficients are not reported. The asterisks ***, ** and, * denote statistical significance at 1 percent, 5 percent, and 10 percent levels, respectively.

Explanatory variables	(1)	(2)	(3)	(4)	(5)
FORI			0.076***		0.076***
FORC			0.014***		0.014***
FOR		0.027***		0.0267***	
DOMI				0.004	0.003
DOMC				0.006*	0.006**
DOM		0.006*	0.006**		
DIR		0.005	0.004	0.005	0.004
DIR^2		-0.001	-0.001	-0.001	-0.001
Log Sales	0.059	0.024	0.002	0.025	0.004
Log Age	-0.191**	-0.197**	-0.204**	-0.191**	-0.196**
Group	-0.134	-0.197*	-0.228**	-0.197*	-0.229**
Adjusted R^2	0.297	0.316	0.333	0.316	0.332
F- statistic	18.004***	17.011***	17.705***	16.434***	17.132***

Our findings are consistent with those of prior studies. Boardman *et al.* (1997) use a sample of Canadian firms and find significant performance differences among multinational enterprises or their subsidiaries and domestic firms. They attribute these differences to firm specific advantages (resource heterogeneity) and differences in agency costs among foreign and domestic firms owing to ownership concentration differences. Among emerging economies, Willmore (1986) analyzes a matched sample of foreign and domestic firms in Brazil and finds foreign firms to have higher productivity and greater capital intensity. In addition to the agency cost and resource-based advantages, Wiwattanakantang (2001) finds that institutional factors such as investment promotion benefits lead to performance differences between foreign controlled firms and domestic firms.

We undertake a number of checks to determine whether the differential results reported with regard to foreign corporate shareholdings and foreign institutional shareholdings are due to model specifications. This includes re-estimating the regressions by dropping each of the control variables. In every case, except when we do not control for firm size the differential result persists. The variable Sales, our proxy for firm size, is positively correlated with foreign institutional ownership (*Table 3.3*). This suggests that foreign institutional investment is primarily in large firms. This 'size bias' is consistent with the findings of Kang and Stulz (1997), who report a similar, albeit stronger correlation in their analysis of foreign portfolio ownership in Japan. Moreover, it reinforces the argument that foreign institutional investors invest in large, liquid companies which enable them to exit their positions quickly at relatively lower cost.

The variable representing domestic corporate ownership (DOMC) is positive and significant (*Models (4)* and *(5)* in *Table 3.4a* and *Table 3.4b)* regardless of the performance measure used. This confirms hypothesis *H2a*. The finding is consistent with positive influence exerted by corporate holdings as reported by Claessens (1997) and Qi *et al.* (2000). It is also broadly in agreement with Sarkar and Sarkar (2000) who find that corporate shareholdings beyond 25 percent positively and significantly influence company value.

The regressions in *Models (4)* and *(5)* of *Table 3.4a* confirm hypothesis *H2b* which predicts that domestic financial institutional ownership (DOMI) in India negatively affects firm performance. The reported coefficients are large (0.15 for both models) and attest to the severity of the negative influence attributed to these blockholders. *Models (4)* and *(5)* of *Table 3.4b* that use Q as the performance measure show an insignificant impact. This result is in partial agreement with Khanna and Palepu (2000a) as they do not obtain significant results in any of their cross-sectional specifications using Tobin's Q.[112] However, using panel data from 1990-94, and a specification in which the dependent variable is defined as the change in Tobin's Q, they find a significant negative influence. Furthermore, Sarkar and Sarkar (2000) using a similar measure of performance as our study find that domestic institutional investors have an insignificant effect on company value.[113]

[112] Khanna and Palepu (2000b), who study primarily the influence of diversified groups on firm performance and use ownership variables as controls, find a negative influence of domestic institutional ownership on performance using both ROA and a proxy for Tobin's Q as performance measures.

[113] Their variable excludes state owned development financial institutions and banks.

Hypothesis *H2c* states that ownership by owner managers has a curvilinear relationship with firm performance. Our empirical results do not confirm this hypothesis. In all model specifications, the coefficient estimates of the squared term, DIR^2 are statistically insignificant. Therefore, there is no evidence of an entrenchment effect of owner managers among Indian corporations. Instead, the DIR variable positively influences firm performance *(Models (2)* to *(5)* in *Table 3.4a)* when ROA is the performance measure, however the impact is insignificant when Q is the performance measure *(Models (2)* to *(5)* of *Table 3.4b)*. A speculative reason for the lack of a discernable entrenchment effect could be that most of these holdings (especially in group firms) are rather small. Furthermore, as Dharwardkar *et al.* (2000) indicate, as emerging economies have feeble minority shareholder protection statutes fairly large holdings are necessary to overcome the agency costs and consequently the entrenchment effect possibly sets in only for majority holdings which are prevalent only among a small minority of firms in the sample.

The results of the investigation of the impact of domestic corporate ownership in group-affiliated firms on firm performance (hypothesis *H3a*) are presented in *Table 3.4c*. The interaction variable DOMC*Group is used in *Models (1), (3), (4)* and *(6)* to examine this hypothesis. While the coefficient of the variable is negative in *Models (4)* and *(6)* when Q is the performance measure, it is statistically significant only in *Model (4)*. Moreover, the coefficients of the variable in *Models (1)* and *(3)* are positive although insignificant. There is therefore only weak evidence for *Hypothesis 3a* which postulated that domestic corporate ownership in group firms is used as a vehicle by traditional family based groups to exert their influence on the affairs of the firm and extort private benefits of control.[114] Bebchuk *et al.* (1999) and Johnson *et al.* (2000) present arguments on how these domestic corporate holdings can be used to form pyramids that can be effectively employed for the purpose of tunneling resources at the expense of other shareholders.

Results of testing the hypothesis predicting the impact of owner managers among group firms (*H3b*) are also presented in *Table 3.4c*. This is tested in *Models (2), (3), (5)* and *(6)*. The variable DIR*Group representing owner managers belonging to group

[114] We find that the mean (median) share ownership by domestic corporations (DOMC) belonging to group firms is 34.22 (35.08) whereas the respective figures for non-group firms are 20.23 (14.92). In contrast, the mean (median) figures for all directors and relatives (DIR) are 7.78 (1.54) for group firms and 23.69 (20.76) for non-group firms. These large differences between the DOMC and DIR variables between group and non-group firms clearly suggest that the major proportion of group influence is channeled through domestic corporate holdings.

firms in *Models (2)* and *(3)* is negative but insignificant and in *Model (6)* is positive and insignificant. However, the interaction coefficient DIR*Group in *Model (5)* is found to positively and significantly influence firm performance. This is contradictory to our hypothesis. Therefore hypothesis *H3b* is not supported.

Table 3.4c
Regressions using interactive group dummies

This table presents the results of OLS regressions of firm performance on ownership and firm specific control variables. The sample consists of 1005 Indian firms (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed. Return on Assets (ROA) is defined as the operating profit before depreciation, taxes, interest and other amortization charges over total assets. Q is defined as the sum of the market value of equity and the book value of debt over total assets. Both ROA and Q are winsorized at the 1 percent and 99 percent levels. *DOMC*Group* represents the interaction between domestic corporate ownership and the Group dummy. *DIR*Group* represents the interaction between directors and relatives ownership and the Group dummy. All other variables are defined in *Appendix 3.1*. The regressions are corrected for heteroskedasticity using White heteroskedasticity-consistent standard errors and covariance. Industry dummies and an intercept term are included in each regression but their coefficients are not reported. The asterisks ***, ** and, * denote statistical significance at 1 percent, 5 percent, and 10 percent levels, respectively.

Explanatory variables	ROA			Q		
	(1)	(2)	(3)	(4)	(5)	(6)
FORI	-0.001	-0.004	-0.001	0.014***	0.014***	0.077***
FORC	0.130**	0.130**	0.130**	0.075***	0.077***	0.014***
DOMI	-0.154***	-0.156***	-0.156***	0.004	0.004	0.004
DOMC	0.003	0.039*	0.030	0.010**	0.007**	0.010**
*DOMC*Group*	0.026		0.021	-0.009*		-0.007
DIR	0.091***	0.099***	0.096***	0.003	-0.001	0.001
*DIR*Group*		-0.030	-0.019		0.011**	0.006
Group	-3.822***	-2.618**	-3.422*	0.062	-0.372***	-0.106
Log Sales	3.311***	3.306***	3.255***	0.002	-0.004	0.003
Log Age	-0.349	-0.361	-0.346	-0.205**	-0.201**	-0.206***
Adjusted R^2	0.217	0.217	0.216	0.336	0.335	0.336
F- statistic	9.956***	9.950***	9.639***	17.358***	17.325***	16.874***

Finally, although we do not directly measure the impact of the various ownership variables on non-financial measures of performance in our study, several studies have documented a significant positive influence of foreign holdings and large blockholdings on productivity. On the other hand, the empirical evidence on the influence of institutional shareholders on innovation and productivity is rather mixed.[115]

3.8 Additional analysis and robustness tests

An issue which could raise some concern relates to the endogeniety involved in the relationship between ownership structure and firm performance. It could be argued that instead of ownership structure influencing firm performance, the causality could be other way around i.e., higher levels of performance influences changes in ownership structure. While we do not expect this to be a serious concern in India owing to the relative time stability of most of the ownership categories, we do conduct a test with lagged ownership variables to emphasize the robustness of our results as far as causality is concerned. We employed a regression specification for a small sub-sample of firms for which we had performance data for the year 2001 and ownership data for 2000. Using a lagged measure of the ownership variable implies a stronger assertion of causality.

[115] Griffith and Simpson (2003) examining the differences between manufacturing establishments of different ownership nationalities in Britain find that foreign-owned firms have significantly higher productivity than those that are domestically owned. Similarly, Aitken and Harrison (1999) using Venezuelan data conclude that foreign equity participation is positively correlated with plant productivity, Djankov and Hoekman (2000) find that total factor productivity growth is positively influenced by foreign investment in Czech firms. Hill and Snell (1999) using US data find a positive relationship between ownership concentration and productivity. With regard to UK, Köke and Renneboog (2002) find that large blockholders have a positive impact on productivity in poorly performing firms, while in Germany they find that firms controlled by large banks and insurance companies show higher productivity growth. In contrast though, Januszewski *et al.* (2002) document a negative impact of financial institutions on productivity growth using German data.

Graves (1988) found a negative relationship between institutional ownership and R & D spending in the computer industry in the US. On the other hand, Kochhar and David (1996) using US data find that institutional shareholders influence firms to increase innovation. However, they find differences in the influence of these institutional investors depending whether they are pressure - resistant (e.g. public pension funds) or pressure – sensitive (e.g. insurance companies and banks). While pressure – resistant institutional investors are found to have a positive influence on innovation, pressure – sensitive investors were found to have an insignificant impact. Similarly, Zahra (1996) using US data finds that executive stock ownership and long-term institutional ownership are positively related to entrepreneurship but short-term institutional ownership is negatively associated with entrepreneurship. Hill and Snell (1989) document a positive correlation between ownership concentration and R & D expenditure using US data.

Table 3.5
Lagged estimations

This table presents the results of OLS regressions of firm performance on ownership and firm-specific control variables. The sample consists of 196 Indian firms (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Performance data and other control variables relate to 2001 while ownership data are from 2000. Return on Assets (ROA) is defined as the operating profit before depreciation, taxes, interest and other amortization charges over total assets. Q is defined as the sum of the market value of equity and the book value of debt over total assets. Both ROA and Q are winsorized at the 1 percent and 99 percent levels. The regressions are corrected for heteroskedasticity using White heteroskedasticity-consistent standard errors and covariance. All variables are defined in *Appendix 3.1* Industry dummies and an intercept term are included in each regression but their coefficients are not reported. The asterisks ***, ** and, * denote statistical significance at 1 percent, 5 percent, and 10 percent levels, respectively.

	ROA		Q	
Explanatory variables	(1)	(2)	(3)	(4)
FORC	0.260***	0.307***	0.017***	0.021***
FORI	-0.013	-0.024	0.018	0.017
DOMC	0.024	0.021	0.001	0.001
DOMI	-0.056	-0.049	-0.006	-0.005
DIR	0.135**	0.156***	0.001	0.002
Log Sales	2.728***	2.493***	0.153***	0.132***
Log Age	-1.953	-0.928	0.019	0.100
Group Dummy	-2.373	-0.947	-0.343**	-0.242*
Industry dummies	Excluded	Included	Excluded	Included
Adjusted R^2	0.109	0.127	0.202	0.245
F- statistic	3.987***	3.178***	7.199***	5.857***

While, we were not able to recreate a fully representative sub-sample (in terms of a similar proportion of group/non-group firms etc.), we did follow exactly the same criterion for firm selection as in our main sample. (Sales, age, group affiliation and industry dummies were used as controls. The results are fairly robust. Foreign corporate ownership is positive and significant (at the 1 percent level) using both measures of performance (ROA and Q). In contrast, foreign institutional ownership remained insignificant. Considering that the lagged ownership measure would imply causality, the result further substantiates our argument that foreign corporate ownership is causal of superior performance whereas foreign institutional ownership is reflective in character. Support was also found for the positive influence of director ownership. With regard to domestic corporate ownership and institutional ownership, their influence was on

expected lines (positive and negative respectively) but they were insignificant. These results are depicted in *Table 3.5*

Table 3.6
Censored regressions

This table presents the results of censored regressions of firm performance on ownership and firm-specific control variables. The sample consists of 1005 Indian firms (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed. Return on Assets (ROA) is defined as the operating profit before depreciation, taxes, interest and other amortization charges over total assets. Q is defined as the sum of the market value of equity and the book value of debt over total assets. Both ROA and Q are winsorized at the 1 percent and 99 percent levels. All other variables are defined in *Appendix 3.1*. The regressions are corrected for heteroskedasticity using White heteroskedasticity-consistent standard errors and covariance. Industry dummies and an intercept term are included in each regression but their coefficients are not reported. The asterisks ***, ** and, * denote statistical significance at 1 percent, 5 percent, and 10 percent levels, respectively.

Explanatory variables	ROA	Q
FORI	0.002	0.077***
FORC	0.133***	0.014**
DOMI	-0.155***	0.003
DOMC	0.041*	0.006***
DIR	0.095***	0.002
Log Sales	3.327***	0.011
Log Age	-0.394	-0.205***
Group Dummy	-2.979***	-0.238**
Adjusted R^2	0.216	0.316
Log likelihood	-3833.460	-1685.706
χ^2	311.693***	536.686***

As a robustness check we also performed censored regressions for all the specifications discussed earlier. These censored regressions are robust to the dependent variable being capped at the lower and upper levels. Our results remain unchanged. These results are shown in *Table 3.6*

Finally, to determine if higher levels of firm performance are associated with foreign corporate and institutional ownership, we undertook logit estimation (not reported). The estimation results confirm the positive association of both performance measures with foreign corporate ownership. In contrast only Q is found to have a positive association as far as institutional ownership is concerned. It also documents that large companies which tend to visible and actively traded have a higher probability of being associated with foreign institutional owners. These results are consistent with the

findings and inferences drawn from the principal specifications presented earlier in the chapter.

3.9 Conclusions

Our study demonstrates the necessity of disaggregating foreign ownership into foreign institutional and foreign corporate shareholdings. These two categories of shareholders need to be viewed and analyzed separately. The underlying dynamics governing the investments by institutions and corporations are vastly different. Our findings highlight the fact that the impact of foreign institutional investors on firm performance is not clear-cut. The results reported by earlier studies on aggregate foreign shareholdings need additional review. The distinction we have made in this study between foreign portfolio/institutional ownership and foreign direct/corporate ownership holds relevance among the broader comity of emerging economies, which are characterized by increasing external capital inflows. Future studies examining the role of foreign ownership in emerging economies should incorporate this distinction. We have provided some evidence of the benefits of foreign corporate holdings based on their superior monitoring abilities, resource endowments and skills to use the institutional environment to their advantage. However, we do acknowledge that these shareholdings are not the panacea for all the monitoring and performance ailments facing emerging economy firms.

Although only a small proportion of Indian firms posses foreign corporate shareholdings, their stakes in individual firms are substantial. While their numbers and holding levels are expected to rise in the foreseeable future, in the short and medium term, domestic shareholders have to don the mantle of corporate reformers. Among the outside domestic shareholders, the study shows that domestic corporations positively influence firm performance although the coefficients do not have the same magnitudes as for foreign corporations. Nevertheless, the result assumes significance in view of the fact that domestic corporations hold large blocks of shares, and unlike domestic financial institutions, their monitoring abilities and incentives are substantially superior. Moreover, as firm managements professionalize, travel further along the learning curve and spill over effects begin to manifest themselves, the quality of the monitoring effort may increase.

In the longer term as the government progressively relinquishes control over domestic financial institutions, Indian private institutional investors could gain in

prominence and skill. Under these circumstances, there could possibly be a reversal of some of the negative influence reported by earlier studies as well as ours with regard to domestic financial institutions. It needs to be noted though, that especially with regard to domestic mutual funds, being financial institutions of a similar nature they suffer from some of the very same problems that plague foreign institutional investors.

Finally, the story as far as directors and their relatives shareholding is concerned is a mixed bag. The absence of an entrenchment effect and the strong positive influence, which these shareholders exert when return on assets is the measure of performance, is encouraging. Their lack of influence with regard to stock market measures of performance is puzzling. Further research taking into account more board level parameters and examining their influence on performance may shed more light on this vexing issue.

Appendix 3.1
Variable definitions

Performance variables:

ROA = (Earnings before interest, taxes and depreciation)/(Book value of total assets)

Q = (Market Value of Equity + Book Value of Total Debt)/(Book Value of Total Assets). The market value of equity is calculated using the closing value of stock prices on the last trading day of the financial year.

Ownership variables:

FOR = Percentage of common shares owned by foreign institutional investors and foreign corporations.

FORI = Percentage of common shares owned by foreign institutional investors

FORC = Percentage of common shares owned by foreign corporations

DOM = Percentage of common share owned by domestic (Indian) financial institutions and domestic corporations

DOMI = Percentage of common share owned by domestic financial institutions

DOMC = Percentage of common share owned by domestic corporations

DIR = Percentage of common shares owned by all directors and relatives

Principal control variables:

Sales = Annual sales turnover in Millions of Rupees

Age = Number of years since the date of incorporation of the company

Appendix 3.2
Anecdotal evidence of foreign corporate involvement in Indian firms

Hero Honda Ltd., is a company promoted and managed by the Munjal family (Hero Group) in which Honda Motors, Japan has an equity stake of 26 percent. The company is a major motorcycle manufacturer. The company's board composition is such that it has four directors who are nominated by Honda Motors; two of these directors hold executive positions having designations such as joint managing director and whole time director. These directors are actively involved in the day-to-day management of the affairs of the company. This is an indicator of the level of managerial involvement and transfer of valuable expertise. With regard to technological collaboration, the company states that Honda Motors is actively involved in the introduction of new products and that they have access to Honda's technology and product portfolio. Furthermore, the two companies have jointly finalized a new product rollout program for Hero Honda for the next five years (Hero Honda Ltd., Annual Report, 2002-03)

Tata-Honeywell Ltd., is a Tata Group company in which Honeywell Inc., U.S.A (through Honeywell Asia Pacific Inc.) has a 41 percent equity stake. The company's business activities span industrial and building automation products, control systems and security solutions. Both the Tatas and Honeywell nominate three directors apiece. One of the Honeywell directors serves on the board as company vice-chairman and all three directors serve aboard various board level committees such as the Audit, Remuneration and Shareholder grievance committees. They are therefore entrusted with important monitoring and oversight responsibilities. The company's various business units source technology from Honeywell and its associates. Tata Honeywell serves multiple business units of Honeywell and is an integral part of Honeywell's worldwide engineering project activities. The valuable experience gained by engaging in these global projects is utilized in the company's domestic (Indian) business activities as well (Tata Honeywell Ltd., Annual Report, 2001-02)

Esab India Ltd. is a non-group company in which Esab AB, Sweden and its associated companies (through Esab Holdings Ltd) has a 37 percent equity stake. The company manufactures welding and cutting equipment under technical collaboration from Esab. The profile of one of Esab's directors states that he is the technical director of Esab AB with responsibility for R & D, quality and environment affairs. Esab and its associated companies worldwide contribute three directors to Esab India's board and its nominee is the company chairman. The directors serve on the company's Audit and Investor grievance committees as well (Esab India Ltd., Annual Report 2002)

Snowcem India Ltd. is another non-group company having a technical collaboration with George Lillington & Co. Ltd., U.K. for the manufacture of cement specialty products. George Lillington & Co. has an equity stake of 18 percent in the company and has three directors on the company board (Snowcem India Ltd., Annual Report, 2001-02)

CHAPTER 4

BUSINESS GROUPS AND PROFIT REDISTRIBUTION: A BOON OR BANE FOR FIRMS? [116]

4.1 Introduction

The organizational form of business groups is widely prevalent in many developed economies and most emerging markets. An extensive body of literature has examined Japanese *Keiretsus* (Berglof and Perotti, 1994; Weinstein and Yafeh, 1995; Lincoln, Gerlach and Ahmadjian, 1996; Hoshi and Kashyap, 2001; Gramlich, Limpaphayom and Rhee, 2004). In Europe, Bianco and Casavola (1999), Perotti and Gelfer (2001), Faccio and Lang (2002) and Buysschaert, Deloof and Jegers (2004) document the presence of business groups in several countries including Belgium, France, Italy, Russia and Sweden. Among the emerging economies, Bae, Kang and Kim (2002), Joh (2003) and Baek, Kang and Park (2004) study Korean *Chaebols*, Keister (2000) investigates Chinese business groups, and Khanna and Palepu (2000b, 2000c) provide evidence from India and Chile. Two recent cross-country studies by Khanna and Rivkin (2001) and Claessens, Fan and Lang (2002) further attest to the ubiquitous nature of business groups in emerging economies.[117]

An important feature of a business group is that it can exploit its internal capital market by transferring financial resources across firms. Such transfers can take place in different ways varying from transfer prices, loans at non-market interest rates, new equity issues and asset sales to the extreme form of cash appropriation. Since it is very hard to verify such practices, one can only use an indirect approach to measure these transfers. Transfer of resources can also affect the performance of group-affiliated firms. The purpose of this study is to provide empirical evidence on these issues.

A widely cited study by Bertrand, Mehta and Mullainathan (2002), hereafter BMM, explores the effect of resource transfers by controlling shareholders of business groups. Our study complements their study in several ways. BMM consider one-way resource transfers from firms lower down the pyramid to those higher up the pyramid, whereas in

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[116] This chapter is the result of joint work with Sytse Douma and Rezaul Kabir and is based on CentER discussion paper 2004 nr. 124. We would like to thank Abe de Jong, Marc Deloof, Sonia Falconieri, Marc Jegers, Yi Zhang, seminar participants at Tilburg University and the University of Antwerp, 2003, participants at the Academy of Management Conference, Seattle, 2003 and the Financial Management Association Conference, Denver, 2003 for several useful comments and suggestions.

[117] Please refer to *Appendix 2.1* for a more exhaustive listing of literature on business groups around the world.

our case resources can be transferred across firms regardless of its position in the pyramid. Moreover, resource transfer in our study is not restricted to pyramidal structures only, but also applicable to firms with cross share holdings. BMM analyze the prevalence of tunneling resources among group-affiliated firms, whereas we also incorporate the phenomenon of negative tunneling (or propping): the possibility of lower performing or loss-making firms receiving transfers thereby benefiting even the minority shareholders of these firms.

In addition to documenting redistribution of resources among group-affiliated firms, we relate it with the extent of control exercised by controlling shareholders. Claessens, Djankov, Fan and Lang (2002) document that in a business group the influence of controlling shareholders on firm performance varies with the degree of control. We examine if higher levels of control result in the controlling shareholders possessing greater opportunities to redistribute profits. Furthermore, we investigate the influence of the size of the business group on the process of profit redistribution. This is important because groups consisting of a larger number of firms could be more prone to the phenomenon of profit redistribution.

Finally, we investigate whether profit redistribution among group-affiliated firms takes place efficiently i.e. resources are transferred to more productive firms, or inefficiently i.e. deserving group firms are starved of new investments while less deserving group firms are subsidized. In the former case, significant positive differences in capital expenditures between high and low performing firms should exist, whereas in the latter case no such difference should be observed. The efficiency or inefficiency of the redistribution process ultimately plays a vital role in determining the over or under performance of group-affiliated firms.

We analyze these issues using a large sample of group-affiliated and independent Indian firms. Indian business groups present an interesting staging ground for empirical analysis due to various reasons. Business groups are well defined in India. Each firm is typically a member of only one corporate group, and there are very few mergers between firms belonging to different groups. In many other countries, on the other hand, the classification of firms into groups is not clear-cut. Another appealing facet is that there is a prevalence of a large number of both group-affiliated and unaffiliated listed firms in India. This feature enables us to perform a statistically reliable comparison between these two categories of firms. This is in contrast to many other countries where a substantial proportion of listed firms are affiliated with large business groups only. Finally, with the country in the second decade of an ongoing liberalization process,

many of the erstwhile polices which tended to favor group-affiliated firms have been progressively dismantled. This necessitates an up-to-date analysis of these two competing organizational structures (group-affiliated firms and stand-alone firms).

Resource transfers within the internal capital market of business groups are comparable to those of conglomerates which have received some attention in recent literature (Billet and Mauer, 2003). Yet, there exists an important difference between these two organizational forms. A conglomerate firm typically owns several divisions, while a business group is a collection of legally independent firms with distinct shareholdings. Empirical evaluation of the performance of divisions of conglomerate firms requires estimation of imputed values. This imputed valuation approach has been subject to criticism owing to sample selection bias. On the other hand, an investigation of performance of firms affiliated to a business group does not suffer from this limitation as these firms are separate entities many of which are also quoted on a stock exchange and the audited financial information pertaining to these firms is disclosed regularly. This yields a potentially rich source of financial data that can be usefully employed to determine performance of these individual firms in a relatively unbiased manner.

The results of this study can be summarized as follows. First, we observe that group-affiliated firms significantly under-perform independent firms. The result is robust to alternative performance measures and differences in group size. The extent of underperformance is also substantial. Group-affiliated firms experience a decline in ROA of 3 – 5 percent (in a sample where the mean ROA is almost 14 percent) and a reduction in the average value of Q of 17 – 20 percent (in a sample where the mean Q is 1.25). Second, we document the existence of profit redistribution among group-affiliated firms. We find that group firms exhibiting a higher level of performance in one year undergo a lower level of performance in the subsequent year. The phenomenon of profit redistribution among listed firms persists even after controlling for the presence of unlisted firms in the group. Third, we show that the extent of profit redistribution is influenced by the degree of control exercised by the controlling shareholders as well as the size of the business group. Higher levels of controlling shareholder ownership and larger group size result in greater profit redistribution. Fourth, we document inefficient profit redistribution occurring among group-affiliated firms. We observe that resources are transferred from more deserving group firms to less deserving firms. Our evidence on the cross-subsidization of inefficient group firms offers an explanation for the observed ‘business group discount’. This result remains robust to alternative

explanations of underperformance of group-affiliated firms on account of diversification and resource transfers to unlisted firms.

The remainder of the paper is organized in the following manner. The next section presents a brief discussion of business groups and, in particular, those in India. Subsequently, we develop the hypotheses and illustrate the methodology and the data used in the study. We then present the results of our study and provide some concluding remarks.

4.2 Business groups [118]

Business or corporate groups are a collection of legally independent firms with some commonality of ownership and management by family members. The family members who control a business group can do so through any or a combination of the following devices: dual-class shares, pyramids and cross-shareholdings.[119] These three mechanisms usually enable controlling shareholders to maintain a complete lock on the control of a company while holding less than a majority of the cash flow rights associated with its equity.[120]

Business groups are characterized by diverse features. Khanna (2000) and Khanna and Rivkin (2001) provide a detailed exposition of these features prevalent in different countries. Strachan (1976) points out that although some features like family ties, geographical ties and interlocking directorates tend to be common among business groups, the key characteristics that distinguish a full fledged business group from other types of organizations are diversity of affiliated firms, coalition of individuals and families, and binding relationship. Leff (1978) suggests that members of business groups are linked by interpersonal trust that is formed on the basis of a similar personal, ethnic or communal background.

[118] See *Chapter 2* for a detailed description of the characteristics pertaining to business groups and a description of the Indian institutional context.

[119] Non-equity sources of exercising control such as interlocking directorates are also employed by some groups.

[120] However, the degree and tightness of control exerted among these three mechanisms differ, and are modeled in Bebchuk, Kraakman and Triantis (2000). Pyramids for instance, regardless of whether they are coupled with dual-class shares, result in voting rights being concentrated in the hands of a single company or shareholder, while with cross-shareholdings, the voting rights are distributed over the entire group.

Business groups in India used to depict caste and provincial origins. Most of these traditional groups come from the trading communities (e.g. *banias*) and their initial activities can be traced back to certain parts of the country, although, in more recent times some of the larger groups have assumed a pan-Indian operational character. Groups increased the number of companies under their fold when assets belonging to the erstwhile British companies were acquired. Traditionally, the management of most of these groups was via the managing agency system. Under this system, each of the participating firms signs a management contract with a managing agency which is owned by the group itself. Several of the largest business groups in India like the *Tatas* and the *Birlas* were initially run by managing agencies owned by them. However, this system of managing groups has only historical relevance as the managing agency system was abolished in 1969 as a consequence of amendments in the statute governing corporations in India. In more recent times, control over group firms is exercised through inter-corporate equity investments, holding companies and interlocking directorates.

The identification of business group firms in India can be done with a high degree of accuracy because firms publicly disclose their affiliation to a particular group. The information is revealed in annual reports and/or filings with regulatory authorities. Like in many other countries, business group membership in India is also exogenous. Firms are not free to join a particular group. Despite the institution of a takeover code in the 1990s, the practice of group firms interchanging group affiliations is relatively uncommon. Another remarkable feature is that of diversity of Indian business groups. The largest groups are active in a wide variety of sectors, ranging from automobile production to educational publishing. They cover vast tracts of the industrial sector and contribute to a significant chunk of the country's industrial output. On the other hand, the bulk of the business groups can be categorized as small and medium sized, with the scale and scope of their activities being considerably modest. Whereas many prior studies confine the analysis to the few largest business groups (like big-6 *Keiretsus* in Japan, top-30 *Chaebols* in Korea), we examine all business groups. A final important feature of Indian business groups is that they are not centered on a financial intermediary. Unlike Japanese *Keiretsu* firms, banks are not both creditors and major shareholders of Indian group firms.

4.3. Theory and Hypotheses

4.3.1 Performance of business groups

Similar to conglomerates, business groups are associated with benefits and costs which predominantly accrue as a consequence of the operation of internal capital market. The benefits emanate from the bright side of the operations of the internal capital market where groups can help firms that have difficulties in obtaining financing from the external capital market (Gertner, Scharfstein and Stein, 1994; Stein, 1997; Claessens, Fan and Lang, 2002). Groups can allocate resources efficiently to more deserving firms by transferring funds away from slow growing, cash generating firms to those that are expanding rapidly but need new funds. Business groups also provide co-insurance benefits derived from increased debt capacity and reduction of bankruptcy costs. Prowse (1992) argues that group-affiliated firms help other firms that suffer from adverse economic conditions in order to ensure group's long-term survival. Khanna and Palepu (2000b) argue that business groups in emerging countries generate added value by imitating beneficial functions of several institutions that are prevalent in many advanced countries. Groups can also reduce informational asymmetry problems and can raise funds from the external capital market relatively more easily and at a lower cost than independent firms. Gramlich *et al.* (2004) document that business groups enable high tax-rate member firms to shift income to affiliates with relatively low tax-rates. Finally, group-affiliated firms can benefit from increased economies of scale, operating synergies and market power.

Other studies, on the other hand, argue that there are relatively more costs than benefits associated with business groups. Group-affiliated firms suffer from the consequences of the dark side of the internal capital market (Shin and Stulz, 1998; Scharfstein and Stein, 2000; and Rajan *et al.*, 2000). A significant portion of costs also comes from increased agency problems and conflicts of interest leading to expropriation of minority shareholders by controlling shareholders of business groups (Claessens, Djankov and Lang, 2000; Joh, 2003). In addition, Johnson, La Porta, Lopez-de-Silanes and Shleifer (2000) argue that controlling shareholders in a business group can adopt certain practices of tunneling corporate resources for their own benefits which are detrimental to the minority shareholders as well as the value of the individual firm. Business group firms may also engage in over-investments of free cash flows in other firms (Shin and Park, 1999; Ferris, Kim and Kitsabunnarat, 2003).

The empirical evidence examining the impact of these benefits and costs on the performance of group-affiliated firms is also mixed. Chang and Hong (2000) find that *Chaebol*-affiliated firms in Korea show higher performance than unaffiliated firms. Khanna and Rivkin (2001) in a cross-country study of fourteen emerging markets find that in some economies group affiliation is positively associated with performance while for others the effect is either negative or insignificant. Lins and Servaes (2002), on the other hand, in a cross-country study of seven emerging economies, document lower performance for firms associated with industrial groups. Campbell and Keys (2002), Ferris *et al.* (2003) and Joh (2003) find that South Korean *Chaebols* exhibit lower performance compared to unaffiliated firms. While Khanna and Palepu (2000b) find that the largest and the most diversified Indian business groups exert a significant positive influence on firm performance, they find a significant negative influence on firm performance for firms belonging to small and intermediate sized groups.[121]

Overall, both theoretical arguments and empirical evidence suggest that the consequence of the associated benefits and costs of group affiliation on firm performance is difficult to predict *a priori*. Therefore, we propose the following hypothesis:

> *H1: The benefits (costs) associated with group affiliation outweigh the costs (benefits), and consequently, group-affiliated firms over (under) perform unaffiliated firms.*

4.3.2 Profit redistribution in business groups

The presence of an internal capital market in a business group can lead to resources of one firm being transferred to fund operations of another affiliated firm. Redistribution takes place because there is a real need for new investments for firms that do not have any other means to get adequate resources. Redistribution can also occur because of the benefits accruing to controlling shareholders (and family members) and the principle of solidarity within the business group to keep struggling firms afloat. Another reason for profit redistribution is put forward by Gramlich *et al.* (2004). They

[121] These small and intermediate sized group firms actually constitute the bulk of their sample (as much as ninety percent of Indian group firms).

argue that business groups will engage in income-shifting activities among affiliated firms in order to benefit from reduced combined tax liabilities. Fisman and Khanna (2004) emphasize a related argument for redistribution. They argue that business groups in some developing countries try to benefit from transferring profits to its affiliates located in underdeveloped regions that receive preferential incentives and tax shields from the government. Cestone and Fumagalli (2005) argue that business groups can channel funds to an affiliated firm in order to help it compete more aggressively than other rival firms in the industry. Redistribution is thus considered as a necessary response to changes taking place in a group-affiliated firm's competitive environment.

These arguments clearly suggest that business groups espouse profit redistribution by transferring resources from highly profitable firms to firms with lower profitability. Although no one doubts that such resource transfers are taking place regularly within a business group, there exists no hard evidence of this phenomenon. Johnson *et al.* (2000) argue that transfers made by groups encompass assets being moved out of firms, profits being siphoned off firms and troubled firms being propped up. Bertrand *et al.* (2002) also note that cash resources can be transferred across firms in many ways: firms can give each other high (or low) interest rate loans, manipulate transfer prices, sell assets to each other at above or below market prices, etc. Any empirical analysis to quantify redistribution activities is practically an impossible task because firms carry out these activities in a subtle manner without making any public announcement or disclosing these in annual reports.

An indirect way to detect these transfers is to use the methodogoly employed by Lincoln, Gerlach and Ahmadjian (1996) and Gedajlovic and Shapiro (2002). They argue that the outcome of the redistribution process is such that highly profitable firms will subsequently experience lower profitability while firms with low profitability will subsequently benefit. Accordingly, we propose the following hypothesis:

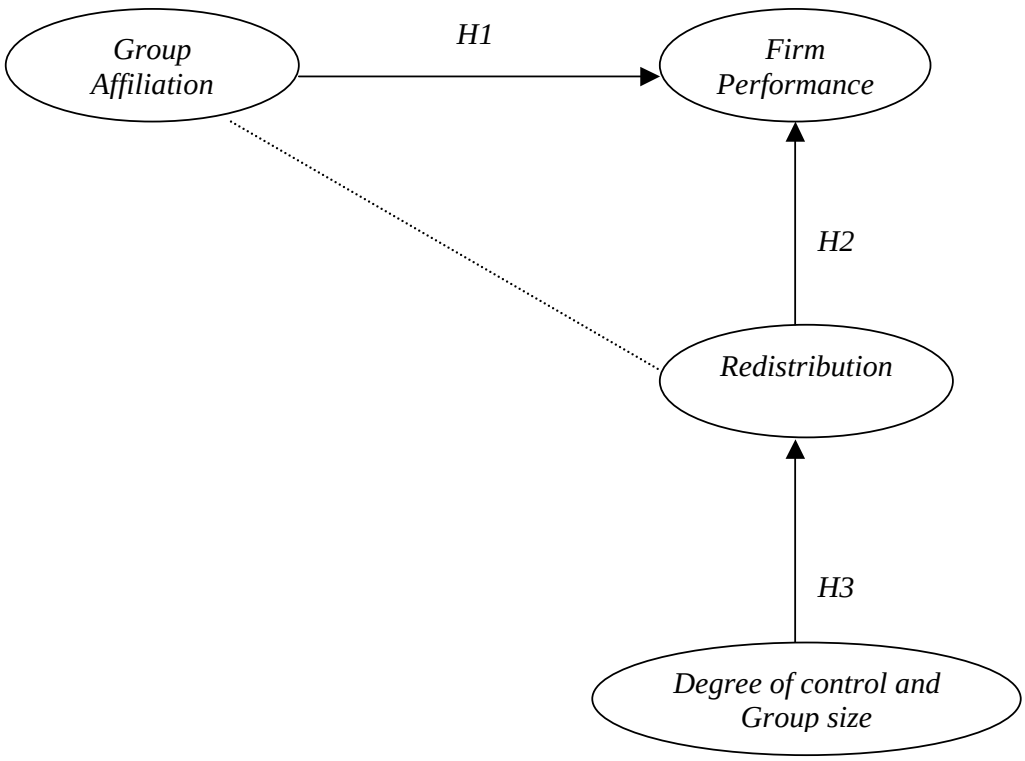
> *H2: For group-affiliated firms, profit redistribution entails that firms with higher (lower) prior profitability will suffer (gain).*

Larger corporate groups are usually involved in a wide range of industries. The differences in individual firm sizes and the wide dispersion of industries in which they operate could result in a greater variance in inter-firm profitability of larger business groups. On the other hand, business groups emphasize profit stability because it ensures their long-term survival (Nakatani, 1984; Prowse, 1992; Ferris *et al.*, 2003). It is,

therefore, more likely that larger business groups engage in more profit redistribution in order to minimize or smoothen differences in individual firm profitability. Larger groups may also consist of more unlisted firms which depend on internal group resources to meet their capital requirements. This in turn leads to a higher probability that capital will be redistributed to a greater extent among firms in larger business groups.

Figure 4.1 below depicts the various hypotheses.

Figure 4.1
Research design



Larger business groups could also include firms with more nebulous ties to the controlling family. Since it is reasonable to expect that the degree of profit redistribution is moderated by the extent of family control, it would be prudent to account for this fact. It is widely known that family members in a business group exercise more control by means of their shareholdings in other group firms. Therefore, we expect the profit redistribution effect to be stronger for firms affiliated to higher levels of corporate control.

Consequently, our third hypothesis is the following:

H3: For group-affiliated firms, the degree of profit redistribution is influenced by the size of the group and the extent of corporate control of these firms.

4.3.3 (In)efficiency of profit redistribution

So far, we focused on profit redistribution in business groups and linked it with some important characteristics of business groups like group-size and corporate control. In this section, we examine whether profit redistribution is efficient i.e. resources are shifted to better performing firms or inefficient i.e. resources are diverted to less performing firms. When the resource allocation mechanism works efficiently among group-affiliated firms, groups transfer resources from firms with poor investment opportunities to firms with good investment opportunities. This will imply that there should be a significant positive difference in capital expenditures between high and low performing firms. On the other hand, inefficiencies will be apparent if deserving group firms are not receiving their due as far as investments are concerned, while less deserving group firms are subsidized. Therefore, we posit the following hypothesis:

H4: For group-affiliated firms, efficient profit redistribution entails that capital expenditures of high performing firms will be higher than low performing firms.

4.4 Methodology

In order to test if group-affiliated firms are more or less profitable than unaffiliated firms, we estimate the following specification using ordinary least squares regression:

$$\text{Performance}_{i,t} = \alpha + \xi\,\text{Group} + \delta\,X_{i,t} + \varepsilon_{i,t.} \quad (1)$$

The dependent variable is a measure of performance of *firm i* in *period t.* Following prior literature, we consider both accounting and stock market-based performance measures. The first measure is return on assets (ROA) defined as the earnings before interest, taxes and depreciation over the book value of total assets. The second measure is Q defined as the market value of equity plus the book value of total debt over book value of total assets.

The main explanatory variable of interest is *Group* which is a dummy variable that takes on the value of one when a firm is affiliated with a group, and zero otherwise. The estimated coefficient ξ measures the impact of group affiliation. If group affiliation causes firm performance to decline, then ξ should be negative.

Khanna and Palepu (2000b) argue that the overall performance of a business group is influenced by the size of the group. Therefore, in a separate specification, we analyze the effect of group size by dividing groups into three size categories: *Group1* (groups with one or two listed firms), *Group2* (groups with three or four listed firms) and *Group3* (groups with five or more listed firms).

We include a vector of additional control variables ($X_{i,t}$) that influence firm performance. This vector comprises ownership, firm size, firm age, leverage and industry affiliation. Several ownership categories are used in various parts of our empirical analysis to control for the effect of ownership on performance. We define these variables by calculating the percentage of total outstanding common shares held by different categories of investors. Three important variables are first used to represent the percentage of a company's outstanding common shares held by financial institutions (FINI), non-financial corporations (CORP), and directors and their relatives (DIR). Earlier studies (e.g. Chibber and Majumdar, 1999) have shown the importance of distinguishing between domestic and foreign shareholders in an emerging market context. The performance impact of these shareholders can be different at a disaggregated level. Therefore, we construct separate ownership variables by decomposing aggregate ownership into its major components: shareholdings by foreign

non-financial corporations (FORC), shareholdings by foreign financial institutions (FORI), shareholdings by domestic non-financial corporations (DOMC) and shareholdings by domestic financial institutions (DOMI).

As control over group firms by the family is exercised primarily through other group firms which is reflected through shareholdings by domestic corporations (DOMC), we examine this variable more closely by decomposing it into three separate variables: domestic corporate shareholding of less than 26 percent (DOMC1); domestic corporate shareholding of 26 percent and above but less than 51 percent (DOMC2); and domestic corporate shareholding of 51 percent and above (DOMC3).[122] This classification enables us to determine the performance impact on group firms due to escalating thresholds of group control over its firms.

The second test performed in this study is that of the profit redistribution effect (*Hypothesis 2*). A group-affiliated firm generating higher cash flows may be required to transfer these resources to another affiliated firm that lacks adequate cash flows. The consequence of this transfer will be that a highly profitable firm in one period will subsequently exhibit a reduction in its profit while a low profitability group firm will subsequently benefit. Lincoln *et al.* (1996) argue that in order to ascertain a significant effect on profitability, the length of the time period in which performance is measured should be long enough for a transfer to occur and its economic impact to become apparent. For example, if redistribution involves channeling funds for new investments in a firm, then it will require a considerable amount of time before the impact of it on the operating performance of that firm is discernible. Accordingly, we consider a time period of one year to be reasonably long enough in order to detect any effect of profit redistribution.[123]

This profit redistribution process is facilitated by the extent of control exercised by the group's controlling shareholders. We use domestic corporate shareholdings as a proxy for the extent of control because it primarily represents inter-corporate shareholdings of the group. A phenomenon like profit redistribution is not expected to

[122] The rationale for choosing these ownership thresholds is that they constitute critical levels as far as control over a firm is exercised. A shareholding of 26 percent enables one to block a *special* resolution that is required to effect crucial decisions relating to changing the line of business, reduction in share capital, mergers, etc. This effectively means that a shareholder wishing to radically change the nature of the firm has to garner the support of 75 percent of the shareholding of the firm for the proposal to be approved. There exists an unambiguous devolution of property rights at a shareholding level of 51 percent and the ability to pass *ordinary* resolutions.

[123] One can argue that the effect of profit redistribution can also be examined using semi-annual data. Unfortunately, data limitations prevent us from doing such an analysis.

occur among independent firms. Therefore, we estimate the following regression specification for group-affiliated firms only:

$$\text{Performance}_{i,t} = \alpha + \lambda\,\text{Performance}_{i,t-1} + \phi\,\text{Control}_{i,t} * \text{Performance}_{i,t-1} + \delta X_{i,t} + \varepsilon_{i,t.} \quad (2)$$

The profit redistribution effect is empirically captured through the coefficient ϕ of the interaction term: Control $_{i, t}$ * Performance $_{i, t-1}$. A negative value of ϕ implies that higher performance of a group-affiliated firm in one period is followed by lower performance in the subsequent period. *Specification (2)* includes several control variables to account for differences in corporate ownership, firm size, leverage, diversification, number of unlisted firms and industry affiliations.

Probing deeper into the phenomenon of profit redistribution, a question that is of considerable interest is whether redistribution among group firms is greater with larger group size and higher levels of corporate control (*Hypothesis 3*). To investigate this, we employ the following specification:

$$\text{Performance}_{i,t} = \alpha + \sum_k \xi\,\text{Group Size} + \lambda\,\text{Performance}_{i,t-1} + \sum_l \varphi\,\text{Control}_{i,t} * \text{Performance}_{i,t-1} + \sum_k \sum_l \phi\,\text{Control}_{i,t} * \text{Performance}_{i,t-1} * \text{Group Size} + \delta X_{i,t} + \varepsilon_{i,t.} \quad (3)$$

where the summation subscripts *k* and *l* denote three group size dummies and control thresholds, respectively. The explanatory variable *Control* includes three different levels of domestic non-financial corporate shareholdings. Similarly, the variable *Group Size* includes three group size categories. These variables form the basis for a set of interactions terms that are employed to determine the joint effect of the degree of corporate control and the extent of group size on profit redistribution. In order to test *Hypothesis 3*, our main interest lies on the coefficient of the interaction term representing the highest level of corporate control and the largest group size.

The fourth hypothesis is concerned with the efficiency of profit redistribution in group-affiliated firms. To examine this, we divide both group and non-group firms on the basis of Q and compare the levels of capital expenditures of these two categories of firms. If profit redistribution takes place efficiently, then high Q group firms are more likely to receive additional funds. This will be reflected in capital expenditures of high Q firms being significantly higher than that of low Q firms. On the other hand, in case of inefficient profit redistribution, we would expect either no such difference or high Q group firms receiving significantly lower capital expenditures in comparison to low Q group firms.

4.5 Data

The data come from a database called "Capitaline 2000" which contains balance sheet, income statement and ownership information for a large number of Indian listed companies. For this study, we analyze firms listed on the Bombay Stock Exchange, which is the oldest, and one of the two main stock exchanges operating in India. Prior published studies related to India also use the stocks listed on this exchange for their analysis. We eliminate financial, utility, real estate, trading and government firms (defined as firm with a total government holding of 50 percent and more) from our sample. We also drop those firms that are subsidiaries of foreign firms (defined as firm with a total foreign shareholding of fifty percent and above). This precludes any ambiguity in identifying Indian firms and enhances the validity of our analysis of group-affiliated firms.

The database clearly identifies firms that are affiliated to a group. The identification of business groups in India is relatively easy and non-controversial because firms are usually members of only one group. Whether a firm is affiliated to a group or not is determined using a variety of sources like public announcements made by individual corporations and groups, and regulatory filings.[124] The data we analyze belong to the fiscal years 1998-2000. The period is relatively recent compared to earlier published studies on India. The final sample comprises a total of 844 companies of which 476 (56 percent) are non-group firms and 368 (44 percent) are group firms.

Tables 4.1a, 4.1b and *4.1c* provide the summary statistics on the firms in our sample. All variables used in this study are defined in the *Appendix 4.1*. To facilitate

[124] We also perform an independent check on group affiliation of 100 large Indian corporations and come to the conclusion that the classification made by the database is accurate.

comparison, we present the information on non-group and group firms separately. We use both accounting and stock market-based performance measures, the descriptive statistics of which are presented in *Table 4.1a.* The mean return on assets (ROA) of non-group (group) firms is 13.98 percent (13.42 percent) while the median ROA of non-group (group) firms is 14.07 percent (14.00 percent).[125] These differences are negligible and statistically insignificant. On the other hand, the mean Q of non-group firms (1.35) is found to be significantly higher than that of the group firms (1.11). Similarly, there are no significant differences among lagged ROA values between group and non-group firms but the median lagged group Q is significantly higher when compared to non-group firms. Khanna and Palepu (2000b) also find insignificant differences in ROA but significant differences in Q between non-group and group firms. We also find that the variability of profits as measured by the standard deviation of ROA and Q is higher among non-group firms than group firms. An F-test for the equality of variances indicates that these differences are also statistically significant.

Table 4.1a
Descriptive statistics
Non-group and group firms: A comparison of key variables

This table reports the summary statistics of the principal variables used in the study. The sample consists of 476 non-group and 368 group firms listed on the Bombay Stock Exchange. All variables except ROA (-1) and Q (-1) are calculated for the fiscal year 1999-2000, and are defined in *Appendix 4.1*. ROA (-1) and Q (-1) are calculated for the fiscal year 1998-1999. The asterisks *** and ** denote that the mean and the median values between non-group and group firms are statistically significant at 1% and 5% levels, respectively.

Variables	**Non-Group**			**Group**		
	Mean	Median	Std. Dev.	Mean	Median.	Std. Dev.
ROA (%)	13.98	14.07	12.80	13.42	14.00	10.82
ROA(-1)(%)	7.24	7.35	15.59	6.07	7.10	12.73
Q	1.35**	0.80	1.74	1.11	0.79	1.19
Q(-1)	1.13	0.74*	0.06	1.02	0.76	0.06
FINI (%)	6.21***	1.67***	9.42	12.28	9.63	11.93
CORP (%)	24.35***	18.74***	20.65	41.10	41.98	21.20
FORC(%)	3.00	0.00	8.15	2.50	0.00	8.65
FORI(%)	0.79	0.00	0.14	1.91	0.00	0.27
DIR (%)	23.42***	20.79***	19.59	7.87	1.54	13.20
DOMC (%)	21.86***	16.17***	19.61	38.10	39.13	20.02
DOMI (%)	5.42***	1.24***	8.45	10.37	7.01	10.48
Sales (Mil. Rupees)	1,323***	409***	5,831	4,381	1,517	11,269
Age (Years)	20***	15***	15	29	24	20
Leverage	3.70***	2.17***	4.66	7.11	5.59	6.15

[125] Outliers usually distort the analysis of financial statement data. Instead of eliminating them from the sample (which leads to a reduction in the number of observations), we winsorize the performance measures at their 1st and 99th percentile values.

Table 4.1a also presents information on the ownership structure of non-group and group firms. We observe that non-group firms have lower percentages of shareholdings by financial institutions (FINI) and non-financial corporations (CORP). These two categories of investors hold, on average, 6.21 percent and 24.35 percent of shares of non-group firms, respectively, compared to 12.28 percent and 41.10 percent, respectively for group firms. The differences in both mean and median values with regard to non-group firms are statistically significant. A decomposition of these aggregate ownerships reveals that ownership by domestic financial institutions (DOMI) as well as domestic non-financial corporations (DOMC) is significantly higher in group-affiliated firms. The average ownership by domestic financial institutions and domestic corporations in non-group firms is 5.42 percent and 21.86 percent respectively, compared to 10.37 percent and 38.10 percent respectively for group firms.

We also find that the fraction of shares held by directors and their relatives (DIR) is very low for group firms. For the non-group sample, the mean (median) director share holdings are 23.42 percent (20.79 percent) while, for group-affiliated firms, the corresponding values are as low as 7.87 percent (1.54 percent). This difference is due to the fact that group firms are substantially larger than independent firms. It is important to note that the low director shareholdings in group-affiliated firms do not reflect the actual degree of control exercised by the controlling family. Ownership by domestic corporations plays by far the most important role in this regard.

Summary information on other control variables is also presented in *Table 4.1a*. We observe that there are statistically significant differences in these variables between non-group and group firms. The average group-affiliated firm is much larger as can be observed from higher total sales. The median group firm is about four times larger than the median unaffiliated firm. Group firms are also much older and have substantially higher amount of debt. The median group firm is 24 years old compared to 15 years for the non-group firm. Similarly, the debt-equity ratio of the median group firm is 5.59 compared to 2.17 for the median independent firm.

Table 4.1b
Descriptive statistics
Distribution of firms among various business group size categories

The sample consists of 368 group firms listed on the Bombay Stock Exchange. Firms affiliated to *Group 1* have up to two listed firms, while firms affiliated to *Group 2* have three to four listed firms and firms affiliated to *Group 3* possess five or more listed firms. The variables are calculated for the fiscal year 1999-2000.

Group Size	Firms	
	Number	Percentage of total
Group 1	214	58.15
Group 2	86	23.37
Group 3	68	18.48
Total	368	100.00

Table 4.1b gives the distribution of firms across various business group size categories. *Group 1* firms (having up to two listed firms) represent over half of total sample of group-affiliated firms at 58.15 percent. *Group 2* firms (having three to four listed firms) represent 23.27 percent of the sample and *Group 3* firms (with five or more listed firms) represent 18.48 percent of the sample size.

Table 4.1c depicts the number of firms at different domestic corporate ownership (DOMC) thresholds: 162 firms (or 44.02 percent) of the sample of group firms have domestic corporate ownership of less than 26 percent, 106 firms (or 28.80 percent) have domestic corporate holding of 26 percent and above but less than 51 percent and 100 (or 27.17 percent) firms have domestic corporate holding of 51 percent and above.

Table 4.1c
Descriptive statistics
Domestic corporate ownership (DOMC) threshold distributions among group firms

The sample consists of 368 group firms listed on the Bombay Stock Exchange. *DOMC1* firms are firms with a domestic corporate shareholding of less than 26 percent, *DOMC2* firms are those with a domestic corporate shareholding of 26 percent and above but less than 51 percent and *DOMC 3* firms are those that have a domestic corporate shareholding of 51 percent and above. The variables are calculated for the fiscal year 1999-2000.

DOMC thresholds	Firms	
	Number	Percentage of total
DOMC 1	162	44.02
DOMC 2	106	28.80
DOMC 3	100	27.17
Total	368	100.00

Finally, it should also be noted that the sample of firms represents many different industries. The empirical analysis that follows controls for all these factors. Details pertaining to industry distribution are depicted in *Table 4.2*

Table 4.2
Sample industry distribution

The sample consists of 607 (350 non-group and 257 group) Indian firms (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed. Industries are classified on the basis of the US Standard Industrial Classification (SIC) system.

Industry	Number of firms	Percentage of sample
Manufacturing (SIC 35 and 39)	179	21.21
Chemical and allied products (SIC 28)	169	20.02
Textile Mill products (SIC 22)	109	12.91
Electric and other electronic equipment (SIC 36)	65	7.46
Primary Metal Industries (SIC 33)	64	7.70
Food and Kindred products (SIC 20)	53	6.28
Transportation Equipment (SIC 37)	47	5.57
Services (SIC 70, 73, 78 and 80)	47	5.57
Paper (SIC 26)	33	3.91
Stone, Clay and Glass products (SIC 32)	28	3.32
Metal and Mining, Oil and Gas extraction and Petroleum and Coal products (SIC 10, 13, 29)	22	2.61
Rubber and Miscellaneous plastic products (SIC 30)	11	1.30
Leather and leather products (SIC 31)	9	1.07
Non-metallic minerals (SIC 14)	4	0.47
Agriculture (SIC 01, 02, 07, 08 and 09)	4	0.47
Total	844	100

Table 4.3a shows correlation statistics for the whole sample, while *Table 4.3b* depicts these statistics for group-affiliated firms and for variables of specific concern to group-affiliated firms only.

Table 4.3a
Pearson correlation matrix
Full Sample correlations

This table reports the summary statistics of the principal variables used in the study. The sample consists of 476 non-group and 368 group firms listed on the Bombay Stock Exchange. All variables are calculated for the fiscal year 1999-2000, and are defined in *Appendix 4.1*.

	ROA	*ROA(-1)*	*Q*	*Q(-1)*	*CORP*	*FINI*	*FORC*	*FORI*	*DOMC*	*DOMC 1*	*DOMC 2*	*DOMC 3*	*DOMI*	*DIR*	*LOG SALES*	*LOG AGE*	*LEV*
ROA	1																
ROA (-1)	0.60	1															
Q	0.17	0.14	1														
Q (-1)	0.28	0.27	0.77	1													
CORP	0.09	0.05	0.01	0.06	1												
FINI	0.01	0.05	0.08	0.09	0.03	1											
FORC	0.10	0.07	0.05	0.14	0.32	-0.01	1										
FORI	0.09	0.14	0.22	0.21	0.01	0.48	0.02	1									
DOMC	0.09	0.02	-0.01	0.01	0.93	0.04	-0.06	0.01	1								
DOMC1	-0.04	-0.02	0.05	0.01	-0.37	0.02	0.03	0.06	-0.39	1							
DOMC2	-0.02	-0.01	-0.01	-0.03	0.33	0.17	0.05	0.03	0.34	-0.47	1						
DOMC3	0.10	0.03	-0.01	0.03	0.68	-0.10	-0.10	-0.04	0.75	-0.31	-0.31	1					
DOMI	-0.04	-0.01	-0.01	0.01	0.04	0.93	-0.02	0.12	0.04	-0.01	0.18	-0.10	1				
DIR	0.04	0.08	0.01	-0.05	-0.54	-0.32	-0.16	-0.14	-0.50	0.21	-0.28	-0.30	-0.30	1			
LOGSALES	0.31	0.23	0.02	0.09	0.30	0.42	-0.05	0.24	0.30	-0.11	0.17	0.17	0.37	-0.26	1		
AGE	0.04	0.01	-0.13	-0.06	0.21	0.37	0.01	0.09	0.22	-0.05	0.15	0.09	0.38	-0.16	0.43	1	
LEV	-0.08	-0.13	-0.09	-0.09	0.20	0.24	-0.02	0.04	0.22	-0.03	0.14	0.10	0.25	-0.10	0.48	0.37	1

All correlations greater than or equal to 0.07 are significant at $p < 0.05$

Table 4.3b
Pearson correlation matrix
Group sample correlations

This table reports the summary statistics of the principal variables used in the study. The sample consists of 368 group firms listed on the Bombay Stock Exchange. All variables are calculated for the fiscal year 1999-2000, and are defined in *Appendix 4.1*.

	ROA	*ROA(-1)*	*Q*	*Q(-1)*	*FORC*	*FORI*	*DOMC*	*DOMC 1*	*DOMC 2*	*DOMC 3*	*DOMI*	*DIR*	*LOG SALES*	*LOG AGE*	*LEV*	*DIVDUM*	*LOG UL*	*Group 1*	*Group 2*	*Group 3*
ROA	1																			
ROA(-1)	0.60	1																		
Q	0.14	0.07	1																	
Q(-1)	0.20	0.14	0.73	1																
FORC	0.15	0.10	0.11	0.19	1															
FORI	0.10	0.16	0.22	0.16	-0.02	1														
DOMC	0.13	0.09	-0.05	-0.01	-0.08	-0.11	1													
DOMC 1	-0.05	-0.07	-0.01	-0.03	-0.01	0.15	-0.50	1												
DOMC 2	-0.07	0.03	0.03	-0.02	0.12	-0.01	0.10	-0.45	1											
DOMC 3	0.15	0.06	-0.05	0.01	-0.13	-0.11	0.78	-0.31	-0.52	1										
DOMI	-0.07	-0.02	-0.05	-0.07	-0.13	0.04	-0.08	-0.01	-0.25	-0.24	1									
DIR	-0.01	-0.03	0.03	-0.04	-0.13	-0.08	-0.38	0.21	-0.14	-0.23	-0.24	1								
LOG SALES	0.28	0.27	0.02	0.01	-0.07	0.22	0.10	-0.07	0.12	0.01	0.31	-0.13	1							
LOG AGE	-0.01	0.06	-0.10	-0.06	-0.07	0.09	0.05	0.06	0.13	-0.07	0.37	-0.04	0.29	1						
LEV	-0.11	-0.13	-0.10	-0.11	-0.08	-0.01	0.02	0.08	0.06	-0.05	0.22	0.07	0.38	0.32	1					
DIVDUM	0.03	-0.01	-0.07	-0.09	-0.03	-0.01	-0.01	0.04	0.10	-0.08	0.11	-0.03	0.22	0.16	0.20	1				
LOG UL	0.09	0.09	0.06	0.09	-0.01	0.02	0.06	-0.06	0.10	-0.01	0.14	-0.20	0.15	0.19	-0.01	0.04	1			
Group 1	-0.01	-0.04	-0.01	-0.10	-0.07	0.04	-0.21	0.11	-0.05	-0.14	-0.17	0.36	-0.16	-0.15	0.01	0.03	-0.47	1		
Group 2	0.01	0.01	-0.03	-0.03	0.14	-0.03	0.08	-0.04	0.07	0.02	0.10	-0.19	0.09	0.09	0.06	-0.02	0.03	-0.65	1	
Group 3	0.01	0.04	0.04	0.15	-0.06	-0.02	0.18	-0.09	-0.01	0.16	0.11	-0.25	0.10	0.09	-0.07	-0.02	0.55	-0.56	-0.26	1

All correlations greater than or equal to 0.10 are significant at $p < 0.05$

4.6 Empirical results

In this section, we present and discuss the results obtained from different regressions. To determine whether group-affiliated firms over or under-perform, we estimate *Specification (1)* and present the findings in *Tables 4.4*a and *4.4b*. *Table 4.4a* reports regression results for performance as measured by ROA and *Table 4.4b* presents those for Q. Since many factors other than group affiliation can influence firm performance, all of our regression models include several control variables. We use the shareholdings by different categories of owners to control for the ownership structure effect, the log of the number of years since establishment to control for the age of the firm, the log of total sales to control for the firm size effect, and the ratio of total debt to total equity to control for the leverage effect. We also include industry dummy variables to control for industry-specific influences on corporate performance. In total, we have eight regressions that have different configurations of group and ownership variables.

The results in *Table 4.4a* show that the performance of group-affiliated firms is lower than that of unaffiliated firms. We observe that in each regression, the coefficient of the group dummy variable is negative and statistically significant. It indicates that after controlling for firm characteristics like ownership, size, leverage etc., group affiliation is negatively related with corporate performance. In regression *Models (1) and (2)*, the estimated coefficients of the group dummy variable suggest that group-affiliated firms have about 3 – 4 percent lower profitability than independent firms.

Khanna and Palepu (2000b) report earlier that the performance of group-affiliated firms differs with respect to the size of the group. Therefore, as an additional check, we examine separately the profitability of three categories of groups: small groups, medium-sized groups and large groups. The results of regression *Models (3) and (4)* show that the coefficient of each category of group variable is negative and statistically significant. The discount varies between 3 to 5 percent depending on the size of the group and the regression model. Thus, the empirical finding of a significant underperformance of group firms is pervasive regardless of group size differences.

Table 4.4a
Firm performance: ROA regressions

This table reports the results of regression *Specification (1)* in which the dependent variable is return on assets (ROA). The sample consists of 844 group and non-group firms. Return on Assets (ROA) is defined as the operating profit before depreciation, taxes, interest and other amortization charges over total assets. ROA is winsorized at the 1 percent and 99 percent levels. *Group* is a dummy variable which is coded as 1 for firms which are affiliated to a business group and zero otherwise. *Group 1* firms are those firms that are affiliated to groups consisting of two and less listed firms. *Group 2* firms are those firms affiliated to groups consisting of three to four listed firms. *Group 3* firms are those firms that are affiliated to groups consisting of five or more listed firms. All other variables are defined in *Appendix 4.1*. The regression estimates are corrected for heteroskedasticity using White's heteroskedasticity consistent covariance. Statistical significance is represented by the asterisks ***, ** and * which denote significance at 1 percent, 5 percent and 10 percent levels, respectively.

	(1)	(2)	(3)	(4)
Intercept	-21.560***	-25.648***	-21.806***	-25.768***
Group	-3.812***	-2.946**		
Group1			-3.291***	-2.615***
Group2			-4.381**	-3.234**
Group3			-5.392***	-3.992***
FINI	-0.162***		-0.157***	
CORP	0.034*		0.038**	
FORI		0.003		-0.001
FORC		0.118**		0.120***
DOMI		-0.127***		-0.120***
DOMC		0.074***		
DOMC1				0.100
DOMC2				0.066**
DOMC3				0.082***
DIR		0.110***		0.106***
Log Age	-0.178	-0.313	-0.116	-0.269
Log Sales	3.883***	3.809***	3.904***	3.820***
Leverage	-0.504***	-0.534***	-0.514***	-0.541***
Industry dummies	Included	Included	Included	Included
Adjusted R^2	0.225	0.242	0.226	0.240
F-statistic	9.764***	9.703***	9.183***	8.616***

To assess whether the negative group affiliation/performance relationship is also consistent with the stock market-based measure of performance, we perform additional regressions in which the dependent variable is Q. The regressions results are presented in *Table 4.4b*. Group-affiliated firms have a significantly lower Q, as can be observed from regression *Models (5) and (6)*. Similar to the ROA models presented earlier, we estimate *Models (7)* and *(8)* wherein groups are categorized into different size classes.

Table 4.4b
Firm performance: Q regressions

This table reports the results of regression *Specification (1)* in which the dependent variable is Q. The sample consists of 844 group and non-group firms. Q is defined as the sum of the market value of equity and the book value of debt over total assets. Q is winsorized at the 1 percent and 99 percent levels. *Group* is a dummy variable which is coded as 1 for firms which are affiliated to a business group and zero otherwise. *Group 1* firms are those firms that are affiliated to groups consisting of two and less listed firms. *Group 2* firms are those firms affiliated to groups consisting of three to four listed firms. *Group 3* firms are those firms that are affiliated to groups consisting of five or more listed firms. All other variables are defined in *Appendix 4.1*. The regression estimates are corrected for heteroskedasticity using White's heteroskedasticity consistent covariance. Statistical significance is represented by the asterisks ***, ** and * which denote significance at 1 percent, 5 percent and 10 percent levels, respectively.

	(5)	(6)	(7)	(8)
Intercept	-0.029	-0.109	-0.030	-0.253
Group	-0.244**	-0.217**		
Group1			-0.246**	-0.248**
Group2			-0.260**	-0.215*
Group3			-0.213	-0.108
FINI	0.009		0.009	
CORP	0.005***		0.005**	
FORI		0.053**		0.051**
FORC		0.014***		0.014***
DOMI		0.001		-0.000
DOMC		0.006**		
DOMC1				0.016**
DOMC2				0.010***
DOMC3				0.006**
DIR		0.003		0.003
Log Age	-0.154	-0.121	-0.154	-0.131
Log Sales	0.086*	0.067	0.085*	0.069
Leverage	-0.010	-0.008	-0.010	-0.008
Industry dummies	Included	Included	Included	Included
Adjusted R^2	0.338	0.353	0.336	0.353
F-statistic	16.376***	15.865***	15.250***	14.158***

The results also indicate an underperformance of group-affiliated firms. The magnitude of decline in Q varies between 17 to 20 percent (in a sample in which the average Q is 1.24) depending on the model specification. These results confirm our previous finding from *Table 4.4a* that firms affiliated to business groups exhibit lower performance, and thus, provide strong support for *Hypothesis 1*. This finding is also invariant to the exclusion of one or the other control variables.

Apart from examining the performance of group-affiliated firms, the main aim of this study is to examine the existence of profit redistribution and its impact on group

firms. In order to do so, we analyze the sample of group-affiliated firms separately. The results of regressions estimated using *Specification (2)* are presented in *Table 4.5*. Since profit redistribution is facilitated by the extent of control exercised by business group's controlling shareholders, we present the regression results with / without various ownership variables. As before, these regressions also control for other firm characteristics and industry effects. We also control for two additional factors that could be major determinants of the performance of group firms. First, Lins and Servaes (2002) report that diversification by group-affiliated firms has a negative impact on performance. Consequently, to control for the effect of diversification among group-affiliated firms, we add a diversification dummy as an additional explanatory variable.[126] Second, one can argue that controlling shareholders of listed group firms might also favor profit redistribution to unlisted firms belonging to the same group. This could systematically reduce profitability of listed group firms. The problem could be more severe as the number of unlisted firms within the group increases. We therefore add a new variable to capture this effect. We employ two constructs for this variable: a dummy representing the presence of unlisted firms in the group and the logarithm of the number of unlisted firms affiliated to a group. Since the findings are not different, we report results only for the second variable.

We obtain the following empirical results. For group-affiliated firms, we observe in *Table 4.5* that the estimated coefficient of the interaction variable DOMC * ROA(-1) is negative and highly statistically significant. The finding indicates that a group-affiliated firm with higher (lower) profit in one year experiences a profit reduction (improvement) in the following year. The evidence is consistent with the fact that profit redistribution occurs among group-affiliated firms. It also shows that the channel facilitating profit redistribution is control exercised by domestic corporations. The evidence provided here is consistent with *Hypothesis 2*.

[126] A firm is considered as diversified if its total sales are spread over two or more two-digit segments and less than 90 percent of its sales accounts for one segment.

Table 4.5
Regression results on profit redistribution among group-affiliated firms

This table reports the results of regression *Specification (2)* in which the dependent variable is return on assets (ROA). The sample consists of 368 group-affiliated firms. Return on Assets (ROA) is defined as the operating profit before depreciation, taxes, interest and other amortization charges over total assets. ROA is winsorized at the 1 percent and 99 percent levels. *ROA (-1)* represents the one year lagged ROA. *DOMC* represents the shareholding by domestic non-financial corporations. *DOMC*ROA (-1)* refers to the interaction representing shareholding domestic non-financial corporations and the one year lagged ROA. All other variables are defined in *Appendix 4.1.* The regression estimates are corrected for heteroskedasticity and autocorrelation using Newey-West heteroskedasticity and autocorrelation consistent covariances. Statistical significance is represented by the asterisks ***, ** and * which denote significance at 1 percent, 5 percent and 10 percent levels, respectively.

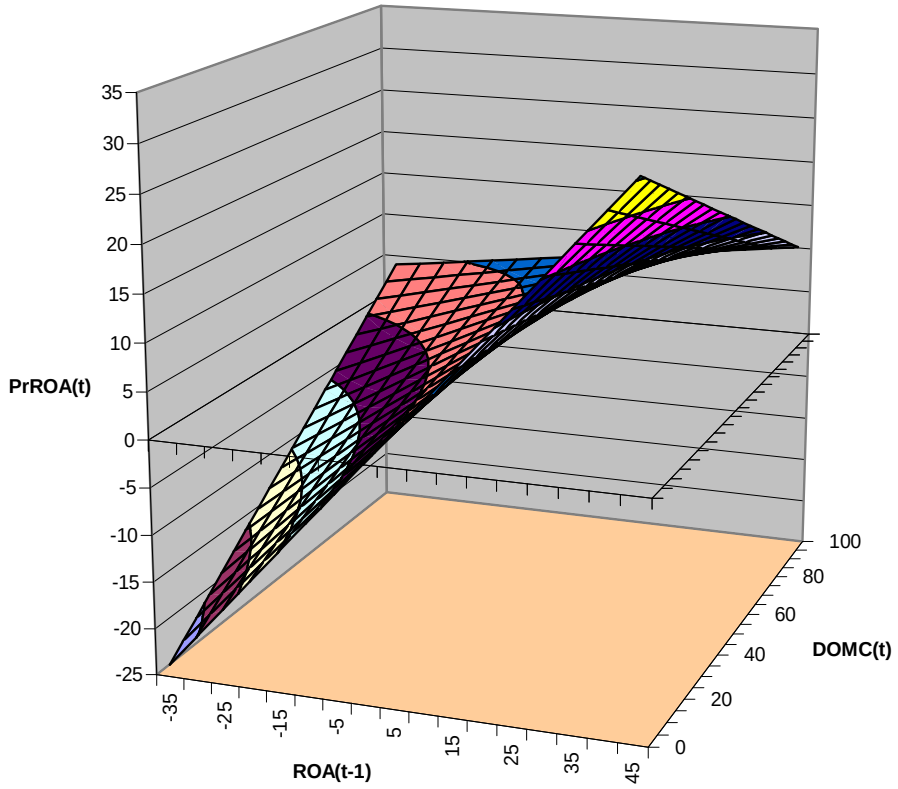
	(1)	(2)
Intercept	0.657	-4.295
ROA (-1)	0.677***	0.651***
DOMC	0.066**	0.087**
*DOMC*ROA (-1)*	-0.006***	-0.006***
FORI		-0.034
FORC		0.128**
DOMI		-0.037
DIR		0.080*
DIVDUM	0.153	0.311
Log Unlisted	0.288	0.481
Log Age	-1.463*	-1.128
Log Sales	1.139***	1.407***
Leverage	-0.108	-0.134*
Industry dummies	Included	Included
Adjusted R^2	0.422	0.433
F-statistic	9.927***	9.248***

The estimated relationship between prior period profitability, domestic corporate ownership and current period profitability is depicted in *Figure 4.2.* The figure portrays, using parameter estimates from *Model (1)*, the profit redistribution effect at various levels of domestic corporate ownership. It clearly shows that at low levels of control the current period profitability is not materially different from that of the prior period. However, when the level of control increases, a significant improvement in profitability takes place in case of firms with low prior profitability while a significant deterioration occurs for firms with high prior profitability.[127]

[127] In order to illustrate the economic importance of this effect further, we compute the change in predicted ROA at high and low levels of prior period ROA using the estimated coefficients at the mean value of DOMC. For example, we find that the predicted ROA is lower (16 percent) when prior period ROA was higher (30 percent), while it is higher (–9 percent) when prior ROA was lower (–25 percent).

Figure 4.2
Profit redistribution in group-affiliated firms

The figure plots the predicted return on assets (PrROA) from regression results presented in *Model (1)* of *Table 3* using coefficients of previous period's ROA (ROA (-1)), domestic corporate ownership (DOMC) and the interaction coefficient DOMC*ROA (-1). It shows how a firm's previous period profitability is related to current period profitability at various levels of corporate control.



Thus far, the results have shown that group-affiliated firms are characterized by the phenomenon of profit redistribution. In order to provide further evidence on the degree of profit redistribution (*Hypothesis 3*), we estimate *Specification (3)* for all group firms. We construct three variables representing different group sizes to examine the influence of group size. We also decompose aggregate domestic corporate ownership into three variables with various thresholds to examine the influence of different levels of control. Our key interest now lies on the variable representing the interaction between domestic corporate ownership thresholds, lagged profitability and various categories of group size. The results are presented in *Table 4.6*

We observe that when we split the aggregate domestic corporate ownership variables into three separate thresholds (*Model (1)*), the profit redistribution effect is still prevalent in all three categories of group firms. More interestingly, we now observe from *Models (2)* and *(3)* that the coefficient of the interaction variable associated with the largest domestic ownership and the largest group size (DOMC3 * ROA (-1) * Group3) is negative and statistically significant. On the other hand, the two interaction terms representing small and intermediate group sizes are not statistical significant. It implies that firms that are affiliated with the largest business groups and that have the highest domestic corporate control experience severe profit redistribution. Overall, our finding is consistent with the *Hypothesis 3*.[128]

[128] The economic significance of this redistribution effect can be estimated by adding the corresponding regression coefficients while keeping the three DOMC variables at their respective mean levels. A graphical plot (not reported) of the redistribution effect depicts that the impact on the fitted values of ROA is quite striking.

Table 4.6
Regression results on profit redistribution with varying group sizes and corporate controls

This table reports the results of regression *Specification (3)* in which the dependent variable is return on assets (ROA). The sample consists of 368 group firms. Return on Assets (ROA) is defined as the operating profit before depreciation, taxes, interest and other amortization charges over total assets. ROA is winsorized at the 1 percent and 99 percent levels. *ROA (-1)* represents the one year lagged ROA. *DOMC1* represents Domestic corporate shareholding of less than 26 percent, *DOMC2* refers to Domestic corporate shareholding of 26 percent and above but less than 51 percent. *DOMC3* represents Domestic corporate shareholding of 51percent and above. *Group 1* firms are those firms that are affiliated to groups consisting of two and less listed firms. *Group 2* firms are those firms affiliated to groups consisting of three to four listed firms. *Group 3* firms are those firms that are affiliated to groups consisting of five or more listed firms. All other variables are defined in *Appendix 4.1.* The regression estimates are corrected for heteroskedasticity and autocorrelation using Newey-West heteroskedasticity and autocorrelation consistent covariances. Statistical significance is represented by the asterisks ***, ** and * which denote significance at 1 percent, 5 percent and 10 percent levels, respectively.

	(1)	(2)	(3)	(4)
Intercept	-1.188	-1.413	-1.369	-6.071
ROA (-1)	0.790***	0.501***	0.736***	0.747***
Group2	-1.020	-1.158	-1.308	-1.298
Group3	-4.051***	-2.189*	-3.554**	-2.887*
DOMC1	0.183	0.076	0.195*	0.195*
DOMC2	0.049	-0.010	0.064	0.064
DOMC3	0.103***	0.046**	0.108***	0.108***
*DOMC1*ROA (-1)*	-0.018**		-0.014	-0.011
*DOMC2*ROA (-1)*	-0.009**		-0.009**	-0.008**
*DOMC3*ROA (-1)*	-0.009***		-0.006***	-0.006***
*DOMC1*ROA (-1)*Group1*		-0.002	-0.004	-0.007
*DOMC2*ROA (-1)*Group2*		0.001	0.002	0.002
*DOMC3*ROA (-1)*Group3*		-0.008***	-0.005*	-0.006*
FORI				-0.052
FORC				0.150***
DOMI				-0.008
DIRECTORS				0.077*
DIVDUM	0.168	0.444	0.406	0.637
Log Unlisted	1.629*	1.587*	1.740*	1.700*
Log Age	-1.358*	-1.279	-1.327	-1.119
Log Sales	1.286***	1.318***	1.260***	1.444***
Leverage	-0.139**	-0.135*	-0.137**	-0.163**
Industry dummies	Included	Included	Included	Included
Adjusted R^2	0.439	0.428	0.444	0.455
F-statistic	8.965***	8.614***	8.506***	8.120***

Next, we examine the efficiency of profit redistribution among group-affiliated firms *(Hypothesis 4).* If business groups allocate resources efficiently, high Q group firms should receive more funds, while low Q group-affiliated firms should not be subsidized. We, therefore, expect a significant positive difference in capital expenditures between these two categories of group-affiliated firms. Independent firms are not subject to any distortion in internal resource transfers, and consequently, rely more on the external capital market. This should *ceteris paribus* be reflected in a significant positive difference in capital expenditures between high Q and low Q non-group firms.

Table 4.7
Capital expenditure differences between non-group and group firms

This table reports mean (median) Q and capital expenditures (Capex) of 424 non-group and 341 group firms classified into two categories based on their median Q values. Q is defined as the Market value of equity plus the book value of total debt over book value of total assets. Capex (Capital expenditures) is defined as the ratio of the difference between the purchase and sale of fixed assets over lagged value of total assets.. The asterisks *** denotes that the mean and the median values between high Q and low Q firms are statistically significant at the 1 percent level. The t-test is used to determine the equality of means whereas the Wilcoxon/Mann-Whitney test is used to determine the equality of medians.

	Non-Group		**Group**	
	Q	*Capex*	*Q*	*Capex*
High Q firms	2.105 (1.224)	0.100 (0.052)	1.607 (1.060)	0.085 (0.047)
Low Q firms	0.579 (0.610)	0.064 (0.033)	0.628 (0.654)	0.073 (0.045)
Difference in capital expenditures		0.036*** (0.019)***		0.012 (0.002)

Both independent and group-affiliated firms are classified into two categories based on their median Q values.[129] From the results shown in *Table 4.7*, we find a significant difference in capital expenditures between the two non-group firm categories. The mean (median) capital expenditures for high Q non-group firms are 10 percent (5.2 percent) which are significantly higher than those of corresponding low Q firms. On the other hand, the mean (median) capital expenditures of high Q group-affiliated firms are 8.5 percent (4.7 percent) which are not significantly different from low Q group-affiliated firms. The lack of a statistically significant difference in capital expenditures between high Q and low Q group firms indicates that large inefficiencies persist in the resource allocation of group-affiliated firms. The results do not provide support for *Hypothesis 4*. Since resource allocation of such nature represents a transfer of wealth from deserving firms to undeserving firms, it offers an explanation to the previously documented underperformance of group-affiliated firms.

4.7 Additional analysis and robustness tests

We conducted a number of additional analyses regarding the effects of group affiliation on performance and redistribution. First, we conducted some exploratory analysis to determine the effects of group affiliation over time. The prime motivation for doing this was to examine the possibility that some of the positive effects of group membership have atrophied over time (Khanna and Palepu, 2000c). In particular, our interest was to determine if this could explain the considerably less beneficial nature of group-affiliation that we document in this study using a sample of firms from the year 2000 *vis à vis* Khanna and Palepu (2000b) sample from 1993. Liberalization measures had been initiated only in 1991 and it is quite feasible that the benefits discernable in 1993 have eroded away as liberalization progressed and some of the attendant costs of group-affiliation have begun to outweigh the benefits in later years. While we were unable to examine the influence of group-affiliation using the full set of explanatory variables and controls akin to earlier specifications in the chapter, owing to data limitations, some preliminary evidence on the influence of group-affiliation over time is presented in *Tables 4.8a, 4.8b, 4.8c and 4.8d. Tables 4.8a* and *4.8b* depict the results using Return on Assets (ROA) and Q as the

[129] We also split the sample using Q > 1 as the cut-off value and find qualitatively similar results (not reported).

performance measure, whereas *Tables 4.8c* and *4.8d* show results utilizing alternative performance measures such as Return on Sales (ROS) and Market-to-Book (M/B)

Table 4.8a
The influence of group affiliation over time: ROA regressions

This table reports the results of regression *Specification (1)* in which the dependent variable is return on assets (ROA). The sample consists of 9934 firm-year (4011 group and 5923 non-group firm-year observations) in total. This is depicted in *Model (7). Group dummy* is a dummy variable representing group-affiliation. It takes a value of one if the firm is a member of a group and zero otherwise. *Models (1) to (6)* consist of year-by-year regressions. All other variables are defined in *Appendix 4.1*. The regression estimates are corrected for heteroskedasticity/Auto-correlation using White's heteroskedasticity consistent covariance/ Newey-West hetersoskedasticity and auto-correlation consistent covariances. Statistical significance is represented by the asterisks ***, ** and * which denote significance at 1 percent, 5 percent and 10 percent levels, respectively.

Dependent Variable: ROA

	(1) 94-95	**(2) 95-96**	**(3) 96-97**	**(4) 97-98**	**(5) 98-99**	**(6) 99-00**	**(7) Pooled**
Intercept	-2.318	-8.914***	-9.075***	-9.517***	-12.006***	-12.361***	-6.306***
Group Dummy	**-0.427**	**-0.932***	**-1.931*****	**-2.239*****	**-2.736*****	**-2.810*****	**-2.111*****
Log sales	2.416***	3.200***	3.386***	3.112***	3.165***	3.207***	3.121***
Leverage	-0.258***	-0.671***	-8.478***	-6.318***	-2.332	-1.978***	-0.660**
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time dummies							Yes
Adj. R^2	0.177	0.255	0.300	0.288	0.188	0.233	0.223
F-statistic	27.883***	75.688***	65.028***	67.457***	40.039***	52.021***	190.823***
No. of Observations	1245	2187	1494	1643	1684	1681	9934

Table 4.8b
The influence of group affiliation over time: Q regressions

This table reports the results of regression *Specification (1)* in which the dependent variable is Q. The sample consists of 9934 firm-year (4011 group and 5923 non-group firm-year observations) in total. This is depicted in *Model (7). Group dummy* is a dummy variable representing group-affiliation. It takes a value of one if the firm is a member of a group and zero otherwise. *Models (1) to (6)* consist of year-by-year regressions. All other variables are defined in *Appendix 4.1.* The regression estimates are corrected for heteroskedasticity/Auto-correlation using White's heteroskedasticity consistent covariance/ Newey-West hetersoskedasticity and auto-correlation consistent covariances. Statistical significance is represented by the asterisks ***, ** and * which denote significance at 1 percent, 5 percent and 10 percent levels, respectively.

Dependent Variable: Q

	(1) 94-95	**(2) 95-96**	**(3) 96-97**	**(4) 97-98**	**(5) 98-99**	**(6) 99-00**	**(7) Pooled**
Intercept	1.348***	0.406***	0.188	0.157	0.277*	1.261***	1.302***
Group Dummy	**0.181*** **	**0.090*** **	**0.080***	**0.023**	**-0.072**	**-0.147*** **	**0.044**
Log sales	0.040**	0.081***	0.060***	0.060***	0.073***	-0.002	0.051***
Leverage	0.012***	0.083***	0.592***	0.441***	0.375***	0.254***	0.061*
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time dummies							Yes
Adj. R^2	0.085	0.134	0.212	0.226	0.224	0.254	0.166
F-statistic	12.483***	34.751***	39.798***	48.897***	49.644***	58.222***	133.133***
No. of Observations	1245	2187	1494	1643	1684	1681	9934

Table 4.8c
The influence of group affiliation over time: ROS regressions

This table reports the results of regression *Specification (1)* in which the dependent variable is return on sales (ROS). The sample consists of 9934 firm-year (4011 group and 5923 non-group firm-year observations) in total. This is depicted in *Model (7). Group dummy* is a dummy variable representing group-affiliation. It takes a value of one if the firm is a member of a group and zero otherwise. *Models (1) to (6)* consist of year-by-year regressions. All other variables are defined in *Appendix 4.1*. The regression estimates are corrected for heteroskedasticity/Auto-correlation using White's heteroskedasticity consistent covariance/ Newey-West hetersoskedasticity and auto-correlation consistent covariances. Statistical significance is represented by the asterisks ***, ** and * which denote significance at 1 percent, 5 percent and 10 percent levels, respectively.

Dependent Variable: ROS

	(1) 94-95	**(2) 95-96**	**(3) 96-97**	**(4) 97-98**	**(5) 98-99**	**(6) 99-00**	**(7) Pooled**
Intercept	19.210*	-2.866	-36.720***	-48.744***	-61.018***	-52.570***	-25.983***
Group Dummy	**0.699**	**0.984**	**-5.154*** **	**-4.527** **	**-6.769*** **	**-5.946*** **	**-4.094*** **
Log sales	0.116	2.819***	7.092***	7.551***	8.756***	7.588***	5.961***
Leverage	0.722***	-1.180***	-13.715***	-1.589	-6.891**	-3.959**	-0.367**
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time dummies							Yes
Adj. R^2	0.036	0.070	0.148	0.124	0.172	0.172	0.110
F-statistic	5.605***	17.563***	26.995***	24.212***	35.926***	35.842***	82.901***
No. of Observations	1245	2187	1494	1643	1684	1681	9934

Table 4.8d
The influence of group affiliation over time: M/B regressions

This table reports the results of regression *Specification (1)* in which the dependent variable is the Market-to-Book (M/B) ratio. The sample consists of 9934 firm-year (4011 group and 5923 non-group firm-year observations) in total. This is depicted in *Model (7). Group dummy* is a dummy variable representing group-affiliation. It takes a value of one if the firm is a member of a group and zero otherwise. *Models (1) to (6)* consist of year-by-year regressions. All other variables are defined in *Appendix 4.1*. The regression estimates are corrected for heteroskedasticity/Auto-correlation using White's heteroskedasticity consistent covariance/ Newey-West hetersoskedasticity and auto-correlation consistent covariances. Statistical significance is represented by the asterisks ***, ** and * which denote significance at 1 percent, 5 percent and 10 percent levels, respectively.

Dependent Variable: M/B

	(1) 94-95	**(2) 95-96**	**(3) 96-97**	**(4) 97-98**	**(5) 98-99**	**(6) 99-00**	**(7) Pooled**
Intercept	-12.882***	-10.268***	-6.953***	-8.274***	-9.098***	-9.027***	-5.340***
Group Dummy	**2.646*** **	**1.673*** **	**1.622*** **	**0.975*** **	**0.037**	**-0.249**	**0.993*** **
Log sales	2.591***	1.905***	1.510***	1.431***	1.624***	1.830***	1.774***
Leverage	-0.011	-0.092***	-3.139***	-1.058***	-0.602*	-0.414**	-0.108*
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time dummies							Yes
Adj. R^2	0.197	0.202	0.195	0.160	0.156	0.197	0.191
F-statistic	31.564***	56.187***	32.168***	32.168***	32.192***	42.299***	157.548***
No. of Observations	1245	2187	1494	1643	1684	1681	9934

The results of the analysis confirm the earlier findings demonstrating the negative influence of group-affiliation with ROA and Q as performance measures in the year 2000 using a broader set of firms. More interestingly, these results clearly document the decline in performance of group-affiliated firms over the period 1994-95 to 1999-2000 using various performance measures providing considerable support to the notion that the net benefits of group-affiliation appear to have declined as the process of liberalization had gained momentum.

Second, although our hypothesis is solely concerned with group-affiliated firms, a case could be made for the observed reversion in profits to occur among independent firms as well.

Table 4.9
Test of profit redistribution among non-group firms

This table reports the results of regression *Specification (2)* in which the dependent variable is return on assets (ROA). The sample consists of 476 non-group firms. Return on Assets (ROA) is defined as the operating profit before depreciation, taxes, interest and other amortization charges over total assets. ROA is winsorized at the 1 percent and 99 percent levels. *ROA (-1)* represents the one year lagged ROA. *DOMC* represents the shareholding by domestic non-financial corporations. It takes a value of one if the firm is a member of a group and zero otherwise All other variables are defined in *Appendix 4.1.* The regression estimates are corrected for heteroskedasticity and autocorrelation using Newey-West heteroskedasticity and autocorrelation consistent covariances. Statistical significance is represented by the asterisks ***, ** and * which denote significance at 1 percent, 5 percent and 10 percent levels, respectively.

	(1)	(2)
Intercept	-34.234	-42.485
ROA (-1)	0.454***	0.439***
DOMC	0.057	0.062
*DOMC*ROA (-1)*	-0.002	-0.001
FORI		-0.192
FORC		0.039
DOMI		-0.180
DIR		0.037
Log Age	-0.578	-0.117
Log Sales	2.360***	2.825***
Leverage	-0.327***	-0.366***
Industry dummies	Included	Included
Adjusted R^2	0.452	0.469
F-statistic	15.497***	14.547***

To examine this possibility, we estimate regression *Specification (2)* for the non-group sample, and find that the coefficient of the interaction variable is statistically insignificant.

This confirms the fact that the pattern of redistribution documented in the chapter is unique to group firms. These results are presented in *Table 4.9.*

While we have rationale for using threshold levels at 26 percent and 51 percent of domestic corporate ownership (DOMC), our key variable that captures the influence of controlling owners, we also performed a robustness check using an alternative classification involving a single threshold at 51 percent.

Table 4.10
Regression results on profit redistribution using alternative control and group size compositions

This table reports the results of regression *Specification (3)* in which the dependent variable is return on assets (ROA). The sample consists of 368 group firms. Return on Assets (ROA) is defined as the operating profit before depreciation, taxes, interest and other amortization charges over total assets. ROA is winsorized at the 1 percent and 99 percent levels. *ROA (-1)* represents the one year lagged ROA. *DOMC1a* represents Domestic corporate shareholding of up to 50 percent, *DOMC2a* refers to Domestic corporate shareholding of 51percent and above. *Group1a* firms are those firms that are affiliated to groups consisting of up to four listed firms. *Group2a* firms are those firms affiliated to groups consisting of five or more listed firms. All other variables are defined in *Appendix 4.1.* The regression estimates are corrected for heteroskedasticity and autocorrelation using Newey-West heteroskedasticity and autocorrelation consistent covariances. Statistical significance is represented by the asterisks ***, ** and * which denote significance at 1 percent, 5 percent and 10 percent levels, respectively.

	(1)	(2)	(3)	(4)
Intercept	-0.171	-0.302	0.236	-4.171
ROA (-1)	0.697***	0.494***	0.681***	0.654***
Group2a	-3.378**	-2.198	-2.179	-1.667
DOMC1a	0.014	-0.033	0.007	0.025
DOMC2a	0.075***	0.028*	0.056**	0.074***
*DOMC1a*ROA (-1)*	-0.007**		-0.009	-0.008
*DOMC2a*ROA (-1)*	-0.007***		-0.004*	-0.004**
*DOMC1a*ROA (-1)*Group1a*		-0.001	0.003	0.002
*DOMC2a*ROA (-1)*Group2a*		-0.007**	-0.006*	-0.006**
FORI				-0.026
FORC				0.157***
DOMI				-0.006
DIRECTORS				0.073*
DIVDUM	0.263	0.499	0.377	0.567
Log Unlisted	1.381*	1.387*	1.532	1.501*
Log Age	-1.217	-1.224	-1.220	-1.012
Log Sales	1.186***	1.260***	1.154***	1.322***
Leverage	-0.123*	-0.123*	-0.118*	-0.140*
Industry dummies	Included	Included	Included	Included
Adjusted R^2	0.435	0.428	0.443	0.452
F-statistic	9.562***	9.335***	9.356***	8.754***

These alternative constructs of DOMC are used along with alternative definitions of group-size: dummies representing groups with up to four listed firms versus groups with five or more listed firms. The redistribution results remain unchanged and are depicted in *Table 4.10.*

Group size in all the constructs is based on the number of listed firms in the group. However, many groups include unlisted firms as well. Not accounting for these unlisted firms leads to a downward bias as far as the categorizations concerning group size are concerned. To investigate this issue, we collect data pertaining to unlisted firms for the groups included in the sample and re-estimate the various redistribution specifications using these alternative constructs of group size: dummies representing total number of both listed and unlisted firms. The results remain unchanged. These results are reported in *Table 4.11.*

We also examined a specification which used the logarithm of total number of listed and unlisted firms in the group and found the results to be robust. Regression results omitting reference group (*Group 1*) in the interactions were also examined. Finally specifications incorporating DOMC and DIR in total were examined to determine if controlling director ownership could influence redistribution practices among group firms. The results remain qualitatively similar. These results are not reported.

Table 4.11
Regression results among group-affiliated firms on profit redistribution incorporating unlisted firms in determining group size

This table reports the results of regression *Specification (3)* in which the dependent variable is return on assets (ROA). The sample consists of 368 group firms. Return on Assets (ROA) is defined as the operating profit before depreciation, taxes, interest and other amortization charges over total assets. ROA is winsorized at the 1 percent and 99 percent levels. *ROA (-1)* represents the one year lagged ROA. *DOMC1* represents Domestic corporate shareholding of less than 26 percent, *DOMC2* refers to Domestic corporate shareholding of 26 percent and above but less than 51 percent. *DOMC3* represents Domestic corporate shareholding of 51 percent and above. *Grouptot 1* firms are those firms that are affiliated to groups consisting of two and less listed and unlisted firms. *Grouptot2* firms are those firms affiliated to groups consisting of three to four listed and unlisted firms. *Grouptot3* firms are those firms that are affiliated to groups consisting of five or more listed and unlisted firms. All other variables are defined in *Appendix 4.1*. The regression estimates are corrected for heteroskedasticity and autocorrelation using Newey-West heteroskedasticity and autocorrelation consistent covariances. Statistical significance is represented by the asterisks ***, ** and * which denote significance at 1 percent, 5 percent and 10 percent levels, respectively.

	(1)	(2)	(3)	(4)
Intercept	-2.412	-1.972	-2.371	-6.908
ROA (-1)	0.782***	0.500***	0.766***	0.737***
Grouptot2	0.074	-0.149	-0.164	-0.283
Grouptot3	-1.715	-0.810	-1.205	-0.745
DOMC1	0.171	0.0752	0.163	0.193
DOMC2	0.049	-0.007	0.046	0.066
DOMC3	0.093***	0.046*	0.082***	0.103***
*DOMC1*ROA (-1)*	-0.017**		-0.014	-0.012
*DOMC2*ROA (-1)*	-0.009**		-0.009**	-0.008**
*DOMC3*ROA (-1)*	-0.008***		-0.006***	-0.006***
*DOMC1*ROA (-1)*Grouptot1*		-0.002	-0.002	-0.004
*DOMC2*ROA (-1)*Grouptot2*		0.001	0.002	0.002
*DOMC3*ROA (-1)*Grouptot3*		-0.006**	-0.004	-0.004
FORI				-0.055
FORC				0.147***
DOMI				-0.014
DIRECTORS				0.073*
DIVDUM	0.202	0.229	0.246	0.426
Log Age	-1.084	-1.095	-1.074	-0.867
Log Sales	1.311***	1.347***	1.298***	1.502***
Leverage	-0.134*	-0.131*	-0.131*	-0.159**
Industry dummies	Included	Included	Included	Included
Adjusted R^2	0.432	0.420	0.434	0.445
F-statistic	8.972***	8.581***	8.401***	7.992***

Table 4.12
Regression results on profit redistribution among group-affiliated firms using Q as the performance measure

This table reports the results of regression *Specification (2)* in which the dependent variable is Q. The sample consists of 368 group-affiliated firms. Q is defined as the Market value of equity plus the book value of total debt over book value of total assets. ROA is winsorized at the 1 percent and 99 percent levels. *Q (-1)* represents the one year lagged Q. *DOMC* represents the shareholding by domestic non-financial corporations. *DOMC*Q(-1)* refers to the interaction representing domestic non-financial corporation shareholding and the one year lagged Q. All other variables are defined in *Appendix 4.1*. The regression estimates are corrected for heteroskedasticity and autocorrelation using Newey-West heteroskedasticity and autocorrelation consistent covariances. Statistical significance is represented by the asterisks ***, ** and * which denote significance at 1 percent, 5 percent and 10 percent levels, respectively.

	(1)	(2)
Intercept	0.078	0.078
Q(-1)	1.062***	1.074***
DOMC	0.006**	0.010**
*DOMC*Q(-1)*	-0.008***	-0.006***
FORI		0.024
FORC		-0.005
DOMI		0.007
DIR		0.009**
DIVDUM	0.047	0.066
Log Unlisted	0.022	0.052
Log Age	-0.099	-0.156*
Log Sales	0.018	-0.007
Leverage	-0.004	-0.004
Industry dummies	Included	Included
Adjusted R^2	0.562	0.576
F-statistic	16.694***	15.651***

Third, to determine if the effect of redistribution can also be captured by stock market-based variables, we re-estimated all regression specifications using Q as the performance measure. Evidence from Bertrand *et al.* (2002) points to the possibility of picking up some redistribution practices such as tunneling through Q as well. We obtain similar results when we use Q as an alternative performance measure. The results pertaining to the basic redistribution specification are presented in *Table 4.12*. The other redistribution specifications using Q as the performance measure were also examined but are not reported. The results are substantially similar.

4.8 Conclusions

The study contributes to the literature by documenting profit redistribution as an explanation for the performance difference of firms affiliated to business groups. We find that group-affiliated firms in India under-perform relative to independent firms: return on assets is 3 to 5 percent lower and Q is about 17 to 20 percent lower. This result is consistent with Campbell and Keys (2002), Ferris et al. (2003) and Joh (2003) who investigate the performance of firms affiliated to South Korean business groups, and Lins and Servaes (2002) who examine groups from several emerging countries.

Apart from this general finding, we provide empirical evidence on resource transfers among group-affiliated firms. Our analysis shows the presence of a significant profit redistribution effect within business groups: group-affiliated firms with higher performance subsequently experience a significant decline in performance, and *vice- versa.* We then seek to determine whether the profit redistribution effect is related to the extent of control exercised by the controlling shareholders and the size of the business group. We observe that firms that have high levels of control and that belong to the largest business groups are characterized by severe redistribution.

As domestic corporations controlled by family members play a significant role in managing firms affiliated with business groups, the driving force behind profit redistribution is likely to be solidarity between these shareholders. An interesting question is whether this solidarity interferes with sound economic decision-making and results in a sub-optimal allocation of resources. The evidence presented in this study reveals that the process of redistribution among business group firms is associated with resources being transferred from higher performing firms to lower performing firms. Our finding shows that the utilization of resources by less deserving firms represents major inefficiencies among group-affiliated firms. We believe that this inefficient profit redistribution is a key determinant of the underperformance of group-affiliated firms, and thus provides a major explanation for the observed ‘business group discount’.

A consequence of such these resource transfers is that the interests of some minority shareholders are harmed by the practice, as the minority shareholders of these better performing group firms presumably would prefer that their profits are either reinvested in the same firm or returned to them as dividends, for instance, rather than being used to

subsidize other group firms in an effort to alleviate their financial constraints. The discount associated with the Q could be a reflection of this fact. Minority shareholders perceive group- affiliated firms to be considerably less transparent and having potentially greater opportunities to redistribute firm resources as compared to their non-group counterparts.[130] Furthermore, the adverse social consequences of 'economic entrenchment' by business groups remain unresolved.

[130] Apart from the costs to minority shareholders, the survival of the group itself may ironically be threatened as a consequence of the redistribution process. Redistribution entails that profit earners within the group part with their surpluses for the benefit of weaker and possibly less efficient members. As this is often done with a considerable degree of reluctance by the profitable members of the group purely in deference to patriarchal and familial obligations, this could with the passage of time eventually sow the seeds for the destruction of the group itself. Splits in many Indian groups have occurred primarily on account of this fact.

Appendix 4.1

Variable definitions

ROA: Return on assets defined as the earnings before interest, taxes and depreciation over the book value of total assets

Q: Market value of equity plus the book value of total debt over book value of total assets. The market value of equity is calculated using the closing value of stock prices on the last trading day of the financial year.

Group: Dummy measure of group affiliation which takes a value of one for a firm affiliated with a group and zero otherwise

Group1: Dummy measure of group affiliation for groups with two or less listed firms

Group2: Dummy measure of group affiliation for groups with three and four listed firms

Group3: Dummy measure of group affiliation for groups with five or more listed firms

FINI: Shareholding by foreign and domestic financial institutions

CORP: Shareholding by foreign and domestic corporations

FORI: Shareholding by foreign financial institutions

FORC: Shareholding by foreign non-financial corporations

DOMI: Shareholding by domestic financial institutions

DOMC: Shareholding by domestic non-financial corporations

DOMC1: Domestic corporate shareholding of less than 26 percent

DOMC2: Domestic corporate shareholding of 26 percent and above but less than 51 percent

DOMC3: Domestic corporate shareholding of 51 percent and above

DIR: Shareholding by directors and their relatives

Age: Years since the incorporation of the firm

Sales: Total sales of the firm

Leverage: Defined as the ratio of total debt to equity capital

Capex: Capital expenditures defined as the ratio of the difference between the purchase and sale of fixed assets over lagged value of total assets

DIVDUM: Diversification dummy which takes a value of one if a firm's sales are spread over two segments and less than 90 percent of it's sales are in a single segment, and zero otherwise

Unlisted (UL): The number of unlisted firms affiliated to a group firm

Group1a: Dummy measure of group affiliation for groups with up to four listed firms

Group2a: Dummy measure of group affiliation for groups with five or more listed firms

DOMC1a: Domestic corporate shareholding of up to 50 percent

DOMC2a: Domestic corporate shareholding of 51 percent and above

Grouptot1: Dummy measure of group affiliation for groups with two or less listed and unlisted firms

Grouptot2: Dummy measure of group affiliation for groups with three and four listed and unlisted firms

Grouptot3: Dummy measure of group affiliation for groups with five or more listed and unlisted firms

ROS: Return on Sales as the earnings before interest, taxes and depreciation over the value of total sales

M/B: Market-to-Book is defined as the market value of equity over the book value of equity.

CHAPTER 5

DIVERSIFICATION AND FIRM PERFORMANCE: THE INTERPLAY OF BUSINESS GROUP AFFILIATION, BUSINESS GROUP SIZE AND OWNERSHIP STRUCTURE

5.1 Introduction

The relationship between firm diversification and performance represents one of the most extensively researched areas in the fields of strategic management and corporate finance. Two recent survey papers: Palich, Cardinal and Miller (2000) and Martin and Sayrak (2003) examining the subject from the strategy and finance perspectives attest to the wide ranging and continuing interest in the subject. However, while there is no dearth of studies which have examined the influence of firm diversification on performance, albeit without much consensus, few studies have examined the impact of the firms' organizational characteristics in influencing this relationship. Such an approach had been advocated by studies such as Chandler (1962) and Dess, Gupta, Hennart and Hill (1995).[131]

Taking cue from these suggestions this study explores the influence of firm diversification on performance by incorporating two important organizational characteristics: business group affiliation and ownership structure. As discussed in *Chapter 2*, business groups are a widely prevalent organizational form in most emerging and many developed economies. They represent a collection of firms linked together by commonality in ownership and controlling family members of similar personal, ethnic or communal background.[132] These groups are often engaged in a wide range of activities. For instance, some of the largest groups are active in a wide variety of sectors, ranging from automobile production to educational publishing. They cover vast tracts of the industrial sector and contribute to a significant chunk of the country's industrial output. On the other hand, the

[131] Dess *et al.*, 1995 argue that most of the research on diversification has failed to control for organizational characteristics such as structure. In their study they stress on the inadequacies of the earlier approaches examining the relationship between diversification and performance owing to the assumption that organizational structure is invariant across firms. According to them this is an assumption that is simply untenable.

[132] See Khanna (2000), Khanna and Rivkin (2001) and *Chapter 2* of the thesis for detailed exposition of features prevalent among business groups in different countries.

bulk of the business groups can be categorized as small and medium sized, with the scale and scope of their activities being considerably modest. Therefore, apart from diversification decisions pertaining to individual firms in the group, controlling owners of these group-affiliated firms engage in strategic decisions concerning group scope by determining the size of the group in terms of the number of firms affiliated to the business group. These decisions pertaining to group size could impinge on firm level diversification strategies engaged by individual group-affiliated firms. While a few studies (e.g. Khanna and Palepu, 2000b; Lins and Servaes, 2002; Claessens, Djankov, Fan, Lang, 2004) have examined the influence of group-affiliation, hardly any study has examined the interface between group size and firm diversification. This study attempts to fill that gap in literature.[133]

The other organizational characteristic which is a focus in this study is ownership structure. As with group-affiliation, there is a paucity of studies which have undertaken an in-depth investigation of the influence of the firm's ownership structure on the diversification-performance relationship. The few studies that have examined the influence of ownership structure have focused on their influence on firm diversification and not on their moderating role in influencing firm performance (e.g. Amihud and Lev, 1981; Denis, Denis and Sarin, 1997; Ramaswamy, Li and Veliyath, 2002). Our focus here is to determine whether higher levels of certain categories of ownership variables have a differential impact on the ability of the firm to generate value from diversification strategies.

In order to investigate the influence of these organizational characteristics we use data from Indian firms. Using data on firms from India enables us to use a large number of listed group-affiliated and independent firms. It is possible to identify business group affiliation in India with a high level of accuracy. This information is publicly disclosed in annual reports and/or filings with regulatory authorities. Indian firms are a member of only one business group and do not usually change their group affiliation over time. The firms are also publicly listed on the stock exchange thus fulfilling more stringent criteria on disclosure and audit, and providing data for constructing both accounting and stock market based performance measures. Furthermore, we make use of detailed product classifications

[133] In some ways this answers the call for conducting more strategy research across multiple levels: corporate, business etc. (see Dess *et al.*, 1995)

based the Harmonized System (HS) developed by the World Customs Organization, Brussels, to construct the diversification measures.[134]

The remainder of this paper is organized as follows: *Section 5.2* introduces and discusses the various hypotheses. This is followed by a brief description of the data and the methodology in *Sections 5.3* and *5.4.* The empirical results are presented and discussed in *Section 5.5* and *Section 5.6* offers some concluding remarks.

5.2 Theory and Hypotheses:

5.2.1 Firm diversification advantages

5.2.1.1 Internal capital market efficiencies

A single business firm has no access to investment from cross subsidization, so its sources of capital (debt and equity) are more costly than internally generated funds, when efficiently managed (Froot, Scharfstein and Stein, 1994, Lang, Poulsen and Stulz, 1995). The diversified firm has much greater flexibility in capital formation since it can access internally generated resources well as external funds (Lang and Stulz, 1994, Stulz, 1990). Efficient internal capital market models typically suggest that diversification creates value. By forming an internal capital market where the internally generated cash flows can be pooled, diversified firms can allocate resources to their best use (Weston, 1970; Williamson, 1975; Li and Li, 1996; Stein, 1997; Harris and Raviv, 1996 and Matsusaka and Nanda, 2002). Further evidence on the superior performance of diversified firms using internal markets for capital and other resources include Grant (1988); Ravenscraft and Scherer (1987); Rumelt (1982) and Taylor and Lowe (1995).

One of the principal premises behind the efficiency of internal capital markets is that internal capital markets are more efficient than external markets because corporate headquarters is likely to be better informed than external suppliers of capital about investment opportunities (Williamson, 1970; Servaes, 1996). Furthermore, headquarters will monitor more because the external capital market is comprised of many small investors, who have very weak incentives to become informed. Moreover, control rights play an important role in making headquarters an effective intermediary. Gertner, Scharfstein and Stein (1994) and Stein (1997) suggest that headquarters control rights have

[134] See *Appendix 5.2* for a brief description on the HS classification system.

two distinct consequences. Firstly, they enable headquarters to capture a portion of the private benefits generated by any project it oversees. To the extent that private benefits are correlated with overall project profitability, this gives headquarters some incentive to favor better projects. Secondly, headquarters control rights allow it to take resources away from some projects in order to give them to other, more deserving ones. Stein terms this activity as 'winner-picking'.

Efficient internal capital models work on the premise that headquarters can allocate investment cheaply and efficiently (*vis à vis* external sources) to more deserving and capital starved divisions with better opportunities by directing capital away from slow growing, cash generating operations to businesses in the portfolio that are expanding rapidly and have great commercial potential, but need investment (Stein, 1997; Scherer, 1980; Shleifer and Vishny, 1990). Both existing divisions as well as new ventures which lack a track record and for which limited information is available to external sources would benefit as a consequence.

5.2.1.2 Market power advantages

Scherer (1980) and Caves (1981) opine that diversified firms can employ a number of mechanisms to create and exploit market power advantages, tools that are largely unavailable to their more focused counterparts. These include predatory pricing (generally defined as sustained price cutting with the design of driving existing rivals from future entry). Bolton and Scharfstein (1990) model the classic case of predation in which a firm with 'deep pockets' uses its asymmetrical financial strength to drive a rival with 'shallow pockets' from the market. The short-term losses incurred in the process are offset with gains from future higher prices (Saloner, 1987). Sustained losses can be funded through cross-subsidization whereby the firm taps excess revenues from one product line to support another (Berger and Ofek, 1995; Scherer, 1980).

Entry deterrence can also be achieved by constructing a reputation for predatory behavior or by signaling that such a response is likely in the event of a new entry (Saloner, 1987).[135] Market power can also derive from the practice of reciprocal buying and selling. The focal company gives preference in purchasing decisions or contracting requirements to

[135] Game-theoretic models that employ predatory pricing schemes include Kreps and Wilson (1982); Milgrom and Roberts (1982); Saloner (1987); Bolton and Scharfstein (1990).

suppliers that are or are willing to become good customers (Scherer, 1980; Sobel, 1984). Greater diversification (i.e. involvement in more factor and product markets) yields increased opportunity for such reciprocity. For example, a company diversifying by acquisition may arrange for its current suppliers to purchase goods from the businesses the company is acquiring (goods previously not offered by the company), (Markham, 1973; Palepu, 1985; Grant, 1988). In a related vein, Bodnar, Tang and Weintrop (1997) discuss the benefits accruing on account of the presence of firm specific assets, which can be exploited in other markets.

5.2.1.3 Benefits accruing through resource sharing

Further benefits of diversification include the ability to exploit excess firm specific assets and share resources, such as brand names, managerial skills, consumer loyalty and technological innovations (Caves, 1971; Montgomery and Wernerfelt, 1988; Teece, 1982; Markides, 1992). The resource-based view is a commonly employed theoretical lens to explain advantages accruing on account of resource sharing associated with diversified firms. For instance, studies by Kogut and Zander (1992); Prahalad and Hamel (1990) and Teece, Pisano and Shuen (1997) show that technology and brand loyalty are important sources of competitive advantage which can be shared by business units to attain and sustain competitive advantages *vis à vis* single segment firms. In a similar vein, studies by Chatterjee and Wernerfelt (1991); Montgomery and Hariharan (1991) and Sharma and Kesner (1996) demonstrate that intangible resources as reflected in R&D and advertising intensities are important determinants of the direction of diversified entry and post entry firm performance. Thus diversified firms which possess more intangible resources could exhibit higher performance. In addition, according to Porter (1987), apart from financial and intangible resources, resource sharing at the corporate level among business units can create value by transferring skills and sharing rent-seeking activities among individual business units. Building on this, Brush (1996) finds evidence of operating synergies among business units.

5.2.1.4 Other benefits

These stem from tax benefits and other financial advantages associated with diversification (Lewellen, 1971; Galai and Masulis, 1976; Madj and Meyers, 1987; Froot, Scharfstein and Stein, 1993; Berger and Ofek, 1995; Servaes, 1996). Majd and Meyers (1987) for instance, note that undiversified firms are at a significant tax disadvantage

because tax is paid to the government when income is positive, but the government does not pay the firm when income is negative. This disadvantage is reduced, but not eliminated, by the tax code's 'carry back' and 'carry forward' provisions. Their analysis predicts that as long as one or more segments of conglomerate experience losses in some years, a conglomerate pays less in taxes than its segments would pay separately. Other studies have focused on the increased debt capacity due to reduced bankruptcy probabilities (Lewellen, 1971; Melicher and Rush, 1973; Higgins and Schall, 1975). The portfolio benefits of firm diversification (incurred by reducing the firm's overall risk by combining businesses with less than perfectly correlated financial flows) have been explored by Lewellen (1971); Sobel (1984); Grant (1988); Berger and Ofek (1995); Lang and Stulz (1994) and Barney (1997). Additional benefits are associated with growth and synergies from combining complementary skills.

5.2.2 Firm diversification costs

5.2.2.1 Internal capital market inefficiencies

The efficient capital market hypothesis is challenged by Jensen (1986); Stulz (1990); Meyer, Milgrom and Roberts (1992); Scharfstein and Stein (2000); Rajan, Servaes and Zingales (2000); Matsusaka and Nanda (2002); Wulf (2002) and Fulghieri and Hoderik (2004) among others. Jensen (1986) asserts that managers of firms with unused borrowing power and large free cash flows are more likely to undertake value decreasing investments. To the extent that lines of business have access to more free cash flow as a part of a diversified firm than on their own, Jensen's argument predicts that diversified firms would invest more in negative net present value projects than their segments would if operated independently.

Meyer, Milgrom and Roberts (1992); Scharfstein and Stein (2000); Wulf (2002) and Fulghieri and Hoderik (2004) belong to a class of models referred to as influence cost models. Influence cost models focus on information and incentive problems between corporate headquarters and division managers that lead to misallocation of funds among divisions hence lower firm value. For instance, in Meyer, Milgrom and Roberts (1992) managers of divisions that have a bleak future have an incentive to attempt to influence the top management of the firm to channel resources in their direction. These influencing activities lead to the cross-subsidization of failing business segments. Since a failing business cannot have a value below zero if operated on its own, but can have a negative

value if it is a part of a conglomerate that provides cross-subsidies, Meyer *et al.* (1992) predict that unprofitable lines of business create greater value losses in conglomerates than they would as stand alone firms.

Wulf (2002) uses influence activities that take the form of signal-jamming, in which players 'jam'or distort signals that others receive (Fudenberg and Tirole, 1986). She builds a model based on managerial efforts to distort information that helps explain how division managers in multi-divisional firms can skew capital budgets in favor of their division. It makes predictions about the sensitivity of division investment to different sources of information, thereby identifying the circumstances under which inefficiencies are more pronounced. Wulf contends that inefficiencies are smaller in firms when division managers are less capable of distorting private information about investment opportunities, when managers face higher private costs of doing so, and when public information is noisy.

While according to Stein (1997) 'winner-picking' endeavor (when allocation is efficient) results in diversification benefits, there is a flip side associated with this activity which Stein terms as 'loser-sticking' (forcing some projects to accept a lower level of funding than they could obtain as stand alones) which entails diversification costs. Furthermore, Scharfstein and Stein (2000) develop a two tiered agency model that shows how rent seeking behavior on the part of division managers can raise their bargaining power and extract greater overall compensation from the CEO. In its most basic form, their model shows that as the CEO is an agent of outside investors, this extra compensation may take the form of not cash wages but rather of preferential capital budgeting allocations. The model further aims at proving a theoretical rationale for the existence of inefficient cross subsidies in internal capital markets. One of its principal results being that large socialist type inefficiencies (weaker divisions being subsidized by stronger ones) are especially likely to arise when there is a great deal of divergence in the strength of the divisions and when the CEO has low powered incentives. Agency cost models have also been used to explain potential investment distortions in diversified firms. Because top management in the diversified firm has greater opportunities to undertake projects, and potentially greater resources to do so if diversification relaxes constraints imposed by imperfect external capital markets, it might over invest resources (Stulz, 1990, Matsusaka and Nanda, 2002). In a related argument, Shleifer and Vishny (1990) argue that CEOs will prefer to invest in industries where they have more personal experience, as this makes them indispensable.

Rajan, Servaes and Zingales (2000) belong to a class of models characterized as power-seeking models (Shleifer and Vishny, 1990, Skaperdas 1992, Hirshleifer, 1995). Rajan *et al.* (2000) model the distortions that internal power struggles can create in the allocation of resources between divisions of a diversified firm. Their model predicts that if divisions are similar in their level of resources and opportunities, funds will be transferred from divisions with poor opportunities to divisions with good opportunities. However, when diversity in resources and opportunities increases, resources can flow toward the most inefficient division, leading to more inefficient investment and less valuable firms. Their findings also suggest that the introduction of a new subunit in a hierarchy can have ramifications for other subunits because it alters the power structure in the hierarchy, and affects the decision making process even if there is no operational link between the new subunit and other subunits.

5.2.2.2 Other costs

Montgomery and Wernerfelt (1988) argue that a firm contemplating diversification will first try to apply its excess assets to the closest market it can enter. If excess capacity remains, the firm will enter markets even further afield but as assets are applied in more distant fields, they lose their competitive advantage and thus earn lower profits. This implies that the relationship between diversification and its marginal benefits is a decreasing function. Penrose (1959) emphasizes the long – run constraints associated with recruiting, training and assimilating new managers as a firm grows. Williamson (1967) stressed the information processing costs of diversification. As top management must gather information from the operating layers of a firm and send down directions based on the information gathered, some of this information gets lost or distorted as it passes from one layer of a hierarchy to another. The loss of information and the inefficiencies that are created as a consequence constitute the costs of diversification. In a similar vein, Meyerson, (1982), Harris, Kriebel and Raviv (1982), discuss the information asymmetry costs that arise between central management and divisional managers in decentralized firms. These costs are higher in conglomerates than in focused firms to the extent information is more dispersed within the firm, leading to the prediction that diversified firms are less profitable than their lines would be separately. Calvo and Wellisz (1978) emphasize the control and effort losses arising from increasing employee shirking as a firm diversifies, Keren and Levhari (1983) stress the co-ordination costs and the intrinsic diseconomies of scale in the

expansion of the firm's hierarchical structure. Prahalad and Bettis (1986) argue about the inefficiencies created when managers continue to apply their existing 'dominant logic' to newly acquired strategically dissimilar businesses and Hoskisson and Hitt (1988) point to the inefficiencies arising from executives' information processing limits.

Because of these myriad benefits and costs it is difficult to predict *a priori* the net impact of these benefits and costs associated with firm diversification on firm performance. Consequently, we formulate the following hypothesis:

> *Hypothesis 1: The net benefits (costs) of firm diversification positively (negatively) influence firm performance. i.e. diversified firms over perform (under perform) their focused counterparts.*

5.2.3 The role of business group-affiliation

While the relationship between diversification and performance has been extensively investigated in the mainstream strategy, finance and economics literatures, this issue has only been recently examined with some vigor among emerging economies primarily on account of the paucity of reliable data at the firm level among these economies. Emerging economy firms also engage in diversification strategies for some of the same reasons as developed economy firms discussed earlier and are subject to similar benefits and costs associated with the diversification decision. In addition, to these, however, the relative lack of institutional development and the prevalence of business groups among these emerging economies lends an added dimension to the diversification-performance relationship.

Apart from their own diversification strategies, firms affiliated to business groups share in some of the benefits and costs associated with group scope by being affiliated to a business group. For instance, the group-affiliated firms can tap into the group's capital and managerial resources and utilize the same for its advantage.[136] On the other hand,

[136] Alternatively, using the resource based view, Guillén (2001), argues that "...entrepreneurs and firms in newly industrialized countries create business groups if political-economic conditions allow them to acquire (and maintain over time as valuable and inimitable) a Schumpeterian capability of combining foreign and domestic resources-inputs, processes, and market access- to repeatedly enter new industries (Schumpeter, 1934). The logic of diversification of business groups in newly industrialized countries entails repeated access to combinations of domestic and foreign resources rather than scope economies or transaction-cost minimization…"

inefficient resource allocation could lead to the group-affiliated firm having to forgo promising investment opportunities if it is forced by the controlling owners to subsidize financially weaker members in the group. This could lead to certain additional benefits (costs) for group-affiliated firms *vis à vis* non-group firms. Consequently, the impact on performance could differ between the two categories of firms.

In recent years, Claessens, Djankov, Fan, Lang (1999, 2003); Khanna and Palepu, (2000b, 2000c); Chang and Hong (2000); Mitton (2002) Choi and Cowing (2002); Lins and Servaes (2002); Fauver, Houston and Naranjo (2003); Ferris, Kim and Kitsabunnarat, (2003) have examined the diversification-performance issue among emerging economies. The studies cover a multitude of emerging economies; some are cross-country in character while others focus on a single country.

Using a broader framework, Kim and Hoskisson (1996) find that Japanese *Keiretsu's* engender various benefits from interfirm cooperation in form of access to complementary resources, distribution outlets, economies of scale and scope and shared costs and risks. This places them at a comparative advantage *vis à vis* non-*Keiretsu* firms. Similarly, Chang and Hong (2000) examining Korean *chaebols* find that group affiliated firms benefit through the use of various internal business transactions among member firms such as debt guarantees, equity investment and internal trade. In addition to these, many *Chaebols* possess group level R & D centers that aid in jointly financing and sharing technological innovations (the benefits from these are not necessarily in proportion to their contributions). Furthermore, the transfer of key personnel among *Chaebol* members facilitates the sharing of technological resources among existing members and provides the necessary technological impetus for new ventures. Among *Keiretsus*, Kim, Hoskisson and Wan (2004) find that those *Keiretsu* firms with equity and director ties of varying strengths benefit when pursuing product diversification whereas independent firms suffer from the pursuit of diversification. In contrast to the positive effects of group-affiliation documented by these studies, Lins and Servaes (2002) report a negative influence for diversified firms which are affiliated with groups. They suggest that this could be owing to the fact that controlling owners in the group could use diversified firms affiliated to the group to expropriate minority shareholders.

The accumulated evidence points to the importance of taking into account group-affiliation and its impact on firm diversification and performance. Consequently, we have the following hypothesis concerning business group effects:

> *Hypothesis 2a: Among group-affiliated firms, the net benefits (costs) of firm diversification positively (negatively) influence firm performance. i.e. diversified group-affiliated firms over perform (under perform) their focused counterparts.*

Groups are quite heterogeneous in character, and therefore, between them their impact on firm performance could differ. The impact on the performance of these group-affiliated firms is likely to differ depending on the type of the group. An important dimension along which this heterogeneity associated within groups can be captured is the size/scope of the group as a whole. For instance, larger groups could possibly internalize the costs associated with these group structures more efficiently and are consequently able to generate more value for the individual group-affiliated firms (Khanna and Palepu, 2000b). Alternatively larger groups could foster greater expropriative tendencies owing greater agency conflicts resulting in a lowering in the performance of some firms affiliated to these groups. Business group size and firm level diversification could also influence each other. Examining how they interact with each other could lead to important insights into the diversification phenomenon and their joint influence among group-affiliated firms.[137] In an emerging economy context, it is difficult to predict *a priori* the nature of the influence. One could argue that group scope/size serves as an alternative means to firm level diversification in creating internal markets (i.e. a substitute relationship).[138] This should result in a negative relationship between group size and firm diversification. This in turn affects the performance of these group-affiliated firms. Alternatively, group affiliation could complement firm level diversification in moving/sharing resources within internal markets. Firm level diversification and group size could also be used in tandem to expropriate resources if larger group size results in more pyramidal/cross-shareholding

[137] An interesting parallel exists here with studies that have examined the relationship between divisionalization among conglomerates and diversification strategies (Rumelt, 1974; Fredrickson, 1986; Keats and Hitt, 1988; Argyres, 1996). In particular, Keats and Hitt (1988) find support for the contention that divisionalized firms provide an environment conducive for diversification. A similar argument could apply to group structures providing a conducive environment for the diversification strategies of affiliated firms.

[138] The implication here is that the business group uses its member firms to further the activities of the group in different industrial segments and markets.

structures. More pyramiding leads to a larger divergence between control and cash flow rights resulting in opportunities and incentives for expropriation through increases in firm diversification due to the weaker link between the firms' performance and owners' wealth (Claessens *et al*., 1999). Consequently:

> *Hypothesis 2b: The influence of firm diversification on performance is moderated by group size.*

5.2.4 The role of ownership structure and business group-affiliation

Denis, Denis and Sarin (1997) contend that as per the agency cost hypothesis, higher managerial ownership is associated with less value reducing actions and is therefore less likely to adopt polices that reduce shareholder wealth. This could lead to a negative relation between the level of diversification and managerial equity ownership. Alternatively, as argued by Amihud and Lev (1981) managers with more equity ownership could engage in more diversification due to the greater need for personal risk reduction. In addition to managerial or director ownership, outside blockholdings (in the nature of corporate holdings) could provide monitoring benefits to firms. Hoskisson and Turk (1990) argue that higher levels of monitoring would reduce agency costs and reduce losses due to excessive diversification. This is could be especially important among economies with weaker corporate governance mechanisms (Dharwadkar, George and Brandes, 2000). Accordingly, the agency cost hypothesis predicts a negative relation between diversification and these blockholders. Therefore, there are sufficient grounds to consider the possibility that relationship between diversification at the firm level and firm performance could be moderated by the ownership structure of the firm. Consequently, we have the following hypothesis.

> *Hypothesis 3a: The influence of firm diversification on performance is moderated by ownership structure. In particular, corporate holdings and direct family and managerial share holdings moderate the relationship.*

However, among group-affiliated firms certain additional agency issues present themselves. Control over group-affiliated firms is exercised directly through director holdings and indirectly through inter-corporate holdings (pyramidal or cross-holdings). Indirect holdings are associated with the possibility of a greater level of divergence

between control and cash flow rights. Their presence could influence the relationship between firm level diversification and performance differently. Either it gives rise to tendencies to expropriate resources by engaging in firm diversification due to the weaker alignment between the firms' performance and owners' wealth in which case more diversification is value destroying. In support of this conjecture, Lins and Servaes (1999) find evidence consistent with the notion that agency problems are a stronger motive for diversification among companies which are associated with stronger ties within the *Keiretsu*. Alternatively, the effect of these holdings could be benign in character. For instance, as argued by Aoki (1994) and Berglof and Perotti (1994) the *keiretsu* system could represent an efficient corporate governance mechanism for monitoring managerial actions. In support of this view, Kim, Hoskisson and Wan (2004) find that keiretsu member firms in general obtain more benefits compared to independent firms in pursuing diversification.[139] Therefore:

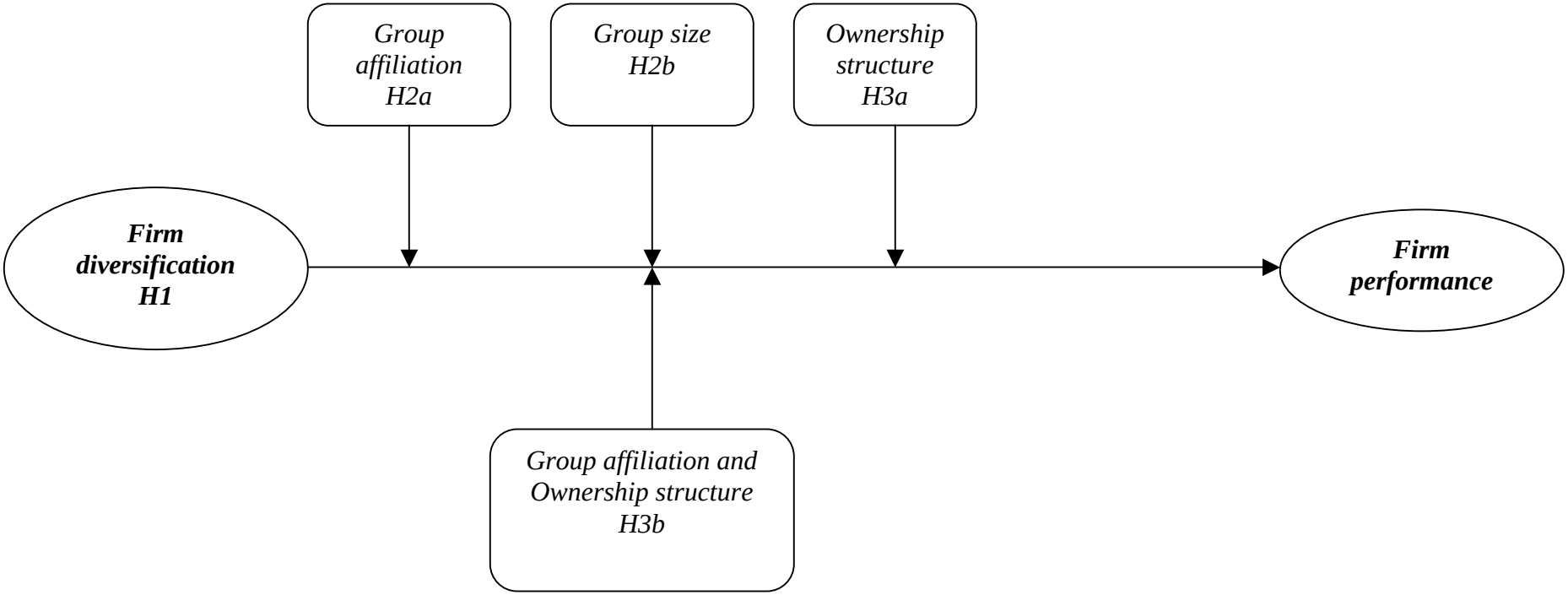
> *Hypothesis 3b: Among group-affiliated firms, the influence of firm diversification on performance is moderated by ownership structure. In particular, the strength of group control moderates the relationship.*

Figure 5.1 illustrates these hypotheses.

[139] Kim *et al.* (2004) categorize Keiretsu firms in accordance with a member firm's power dependence. Keiretsu firms are divided along two clusters. "Cluster 1 consists of keiretsu member firms with presidents' council membership and low levels of dependence on Keiretsu (in equity and directors)". This is strong power group. "Cluster 2 consists of firms with indications of strong dependence on the keiretsu in terms of ownership structure and directors from other members". This is the weak power group. Elements of differing power characteristics among group-affiliated firms are captured to some extent by the use of controlling ownership in this study.

Figure 5.1

Conceptual framework and hypotheses



5.3 Methodology

5.3.1 Diversification measures

We employ a wide range of diversification measures in this study. All the measures are constructed using the Harmonized System (HS) segments. The HS has a structure similar to the Standard Industrialization Code (SIC). For details on the HS structure, please refer to *Appendix 5.2*.

The diversification measures are described below:

First, the simplest measure which is employed is a dummy measure of diversification. This measure is based on the median number of segments in a firm. Firms with business activities in 1-2 segments are classified as focused and firms with activities in 3 and more segments are classified as diversified. The diversified firms are coded as one and the focused firms as zero. Alternative dummy measures classifying firms with activities in a single segment as focused and the firms with activities in more than one segment as diversified are also employed. Second, we use a measure based on the count of non-zero segments in each firm. Third, we employ the Herfindahl diversification measure which has been widely used in a large number of studies investigating diversification issues. Following Acar and Sankaran (1999), this measure is defined as

$$\Sigma_i P_i^2$$

wherein P_i is the proportion of segment sales over total sales of the firm. Fourth, a related measure Herfindahl adjusted (akin to the Montgomery index) is used. Herfindahl adjusted is defined as

$$\Sigma_i P_i^2 / (\Sigma_i P_i)^2$$

wherein P_i is the proportion of segment sales over total sales of the firm. The Herfindahl adjusted measure adjusts for cases wherein the total proportion of sales for all the HS segments of the firm is less than 100 percent. This adjustment is similar to one proposed by

Montgomery (1982) to account for firm sales in foreign markets. Fifth, we also make use of the Jaceqemin-Berry entropy measure. Following Palepu (1985), this measure is defined as

$$\Sigma_i P_i \log(1/P_i)$$

wherein P_i is the proportion of segment sales over total sales of the firm

5.3.2 Basic specifications

In all specifications which are employed for testing the various hypotheses, ROA and Q are used as the performance measures. ROA is defined as the operating profit before depreciation, taxes, interest and other amortization charges over the book value of total assets. Q is defined as the ratio of the sum of the market value of equity and the book value of debt over the book value of total assets. DIVR is the diversification measure. As stated earlier, diversification dummy, logarithm of the number of non-zero HS segments, Herfindahl, Herfindahl adjusted and Entropy indices are used as diversification measures in the various specifications.

In addition to the diversification measures, a number of other explanatory variables are also employed in the various specifications. These include variables such as SIZE, which refers to size of the group the firm is affiliated with. Three group size categorizations similar to those employed in *Chapter 4* are utilized. These group size categorizations are *Group 1*, *Group 2* and *Group 3*. *Group 1* consists of firms affiliated to business groups with up to two listed group firms. *Group 2* consists of firms affiliated to business groups with three to four listed group firms and *Group 3* consists of firms with five or more listed firms affiliated to business groups. In addition to group size, controlling ownership as represented by domestic controlling ownership and director ownership are also used. Domestic corporate ownership proxies for the inter-corporate holding among group-affiliated entities whereas director ownership represents the direct stakes in the various group-affiliated firms by the controlling family. Apart from these principal explanatory variables, a number of control variables are employed. In the specifications depicted below, **X** represents the vector of control variables which includes firms specific variables such as Ownership, Leverage, Log Sales, Log Age as well as Industry and Group dummy variables.

With the exception of DIVR (diversifications measure) all other variables are as defined *in Chapters 3* and *4.* The full variable list is provided in *Appendix 5.1*

Specification (1) depicted below tests *Hypothesis 1* which examines the influence of firm diversification on the performance of firms. The same specification is also utilized to examine *Hypothesis 2a* which examines the diversification-performance among group-affiliated firms separately.

$$\text{Performance}_{if} = \alpha + \beta \text{DIVR}_{if} + \delta \mathbf{X}_{if} + \varepsilon_{if} \quad (1)$$

A positive value for β (for diversification measures: Herfindahl, Herfindahl adjusted) indicates that less diversification (or more focus) positively influences performance and *vice-versa*. Alternatively, a positive value for β (for diversification measures entropy, logarithm of the number of segments, diversification dummy) indicates that more diversification (or less focus) positively influences performance and *vice-versa.*

Specification (2) tests *Hypothesis 2b* examining the interaction between firm diversification and business group size.

$$\text{Performance}_{if} = \alpha + \beta \text{DIVR}_{if} + \varphi \text{SIZE}_{ig} + \gamma \text{DIVR}_{if} * \text{SIZE}_{ig} + \delta \mathbf{X}_{if} + \varepsilon_{if} \quad (2)$$

SIZE_{ig} is an indicator variable representing the size of the group the firm is a member of. It consists of three size categorizations representing the three group size dummies: *Group 1*, *Group 2* and *Group 3*. Different models employing *Specification (2)* use various group size categorizations. The coefficients β and γ in *Specification (2)* determine the effect of the moderating influence of various group sizes on the relationship between diversification and performance

Specification (3) shown below tests *Hypothesis 3a* which examines the moderating influence of controlling ownership as represented by domestic corporate ownership (DOMC) and director ownership (DIR) on the relationship between diversification and performance. The same specification tests *Hypothesis 3b* which examines the moderating influence of controlling ownership among group-affiliated firms.

$$Performance_{if} = \alpha + \beta DIVR_{if} + \theta Ownership_{if} + \gamma DIVR_{if}*Ownership_{if} + \delta \mathbf{X_{if}} + \varepsilon_{if} \quad (3)$$

The coefficients β and γ in *Specification (3)* represent the effect of the moderating influence of the ownership variables on the relationship between diversification and performance.

5.4 Data

The data come from 'Capitaline 2000' a commercially available database. Information pertaining to firm sales for the year 1999-2000 and other relevant variables was available for 821 firms. We eliminated firms wherein we could not categorize at least 90 percent of the total sales output according to the HS code. This left us with a reduced sample of 607 firms. *Table 5.1a* presents the descriptive statistics of the performance measures of this reduced sample.

The final sample consists of 607 (350 non-group and 257 group) Indian firms (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed**.** All variables are defined in *Appendix 5.1*

Panel A depicts the descriptive statistics concerning the two performance measures employed in the study, i.e. ROA and Q. To alleviate problems associated with outlying observations the performance measures have been winsorized at the 1 and 99 percent levels. The mean (median) ROA is 13.23 (13.29) while the mean (median) Q is 1.19 (0.81).

Panel B presents the performance variables categorized into group and non-group firms. Significant differences exist between group and non-group firms only for the mean value of Q. Mean group Q is lower (1.023) than mean non-group Q. Group-affiliated firms also display lower variances compared to independent firms for both ROA and Q. The differences in variances between group and independent firms are significant.

Panel C presents a further sub-categorization of group-affiliated firms based on group size. Three sub-categories representing small, intermediate and large sized groups are formed, i.e. *Group 1*, *Group 2* and *Group 3* respectively. *Group 1* represents business groups with firms comprising of two or less listed firms, *Group 2* represents business groups firms consisting of three or four listed firms and *Group 3* consists of business groups comprising of five or more listed firms affiliated to the group. Only the mean Q of *Group 1* is significantly different from the group of independent firms. The variances of all sub-categories of groups are significantly lower than that of independent firms (the only exception being ROA of *Group 3*).

Table 5.1a
Descriptive Statistics
Performance measures

The sample consists of 607 (350 non-group and 257 group) Indian firms (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed. Return on Assets (ROA) and Q are the used as performance measures. Return on Assets (ROA) is defined as the operating profit before depreciation, taxes, interest and other amortization charges over total assets and Q is defined as the sum of the market value of equity and the book value of debt over total assets. They are winsorized at their 1 percent and 99 percent levels. *Panel A* depicts the performance measures for the whole sample of 607 firms. *Panel B* shows the values of performance measures segregated into group and non-group. *Panel C* represents ROA and Q values for a finer classification of group firms. *Group 1* firms are those firms that are affiliated to groups consisting of two and less listed firms. *Group 2* firms are those firms affiliated to groups consisting of three to four listed firms. *Group 3* firms are those firms that are affiliated to groups consisting of five or more listed firms. In *Panel C*, firm performance of *Groups 1, 2* and *3* are compared with non-group firms. The equality of means, medians and variances is tested using t-test, Wilcoxon/Mann-Whitney and F-test respectively. The asterisks *, **, *** denote significance at 10 percent, 5 percent and 1 percent levels respectively.

Panel A

Performance Measure	Mean	Median	Max	Min	Std. Dev.
ROA	13.227	13.289	51.000	-35.000	12.621
Q	1.185	0.809	10.800	0.230	1.359

Panel.B

Performance Measure	**Group**			**Non-Group**		
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.
ROA	13.114	13.550	11.166***	13.311	13.136	13.606
Q	1.023***	0.806	0.739***	1.303	0.816	1.665

Panel C

Performance Measure	***Group 1***			***Group 2***			***Group 3***		
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.
ROA	12.679	13.583	11.014***	13.788	13.381	11.326**	13.655	12.622	11.640
Q	1.013**	0.803	0.630***	0.964	0.793	0.595***	1.142	0.849	1.158***

Table 5.1b depicts the characteristics of the various diversification measures employed in the study. The diversification measures are calculated using Harmonized system (HS) segment level data at the four-digit level. *Panel A* depicts the mean (median) values of the Herfindahl, Herfindahl adjusted, Entropy and number of segments are 0.691(0.717), 0.711(0.743), 0.552(0.479) and 3.751(3) respectively. *Panel B* depicts the various diversification measures segregated into group-affiliated and independent firms. All the various diversification measures are significantly different for group-affiliated and independent firms. Group-affiliated firms are significantly more diversified than independent firms.

The finding that firms affiliated to groups are more diversified is an interesting one since this result is a negation of the 'substitution hypothesis' (i.e. if group membership provides better access to resources and if firms diversify to enjoy economies of scope, create an internal capital market etc., then one would expect less diversification for group firms, and not more as group affiliation fulfills that objective).

However, similar results have been reported by Lins and Servaes (2002) who examine firms from seven Asian emerging markets (Hong Kong, India, Indonesia, Malaysia, Singapore, South Korea and Thailand) for the year 1995. They find that 58 percent of their sample firms belong to groups. Furthermore, 31.5 percent of the firms affiliated to groups were diversified compared to 25.8 percent of unaffiliated firms. This difference was statistically significant. Claessens *et al.,* (1999, 2004) also find that group-affiliated firms are more diversified than non-group firms in 7 out of the 9 countries and this difference was statistically significant for 5 countries (Hong Kong, Japan, South Korea, Singapore and Taiwan.

Panel C depicts the various diversification measures segregated according to *Group 1*, *Group 2* and *Group 3*. The firms belonging to all three group categories are significantly more diversified than their independent counterparts.

Table 5.1b
Descriptive Statistics
Diversification measures

The sample consists of 607 (350 non-group and 257 group) Indian firms (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed. Descriptive statistics pertaining to various diversification measures: Herfindahl, Herfindahl adjusted, entropy and number of segments are presented. The Herfindahl index is measured by $\Sigma_i P_i^2$, Herfindahl adjusted by $\Sigma_i P_i^2 / (\Sigma_i P_i)^2$, Entropy by $\Sigma_i P_i \log(1/P_i)$ and number of segments by the count of the number non-zero segments in each firm. P_i is the proportion of segment sales over total sales of the firm. Details regarding HS segments are available in *Appendix 5.2. Panel A* depicts the various diversification measures for the whole sample of 607 firms. *Panel B* shows the values of the diversification measures segregated into group and non-group. *Panel C* represents the diversification measures values for a finer classification of group firms. *Group 1* firms are those firms that are affiliated to groups consisting of two and less listed firms. *Group 2* firms are those firms affiliated to groups consisting of three to four listed firms. *Group 3* firms are those firms that are affiliated to groups consisting of five or more listed firms. In *Panel C,* diversification measures of firms affiliated to *Groups 1, 2* and *3* are compared with non-group firms. *Groups 1, 2* and *3* are compared with non-group firms. The equality of means, medians and variances is tested using t-test, Wilcoxon/Mann-Whitney and F-test respectively. The asterisks *, **, *** denote significance at 10 percent, 5 percent and 1 percent levels respectively.

Panel A

Diversification measure	Mean	Median	Max	Min	Std. Dev.
Herfindahl	0.691	0.717	1.000	0.089	0.259
Herfindahl adjusted	0.711	0.743	1.000	0.104	0.261
Entropy	0.552	0.479	2.426	0.000	0.518
Number of segments	3.751	3	24	1	3.237

Panel B

Diversification measure	***Group***			***Non-Group***		
	Mean	Median	Std. Dev	Mean	Median	Std. Dev.
Herfindahl	0.652***	0.648***	0.265	0.720	0.766	0.251
Herfindahl adjusted	0.669***	0.664***	0.269	0.742	0.806	0.251
Entropy	0.657***	0.624***	0.559***	0.475	0.370	0.471
Number of segments	4.549***	3***	3.965	3.166	2	2.420

Panel C

Diversification measure	***Group 1***			***Group 2***			***Group 3***		
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.
Herfindahl	0.667**	0.660**	0.265	0.619***	0.603***	0.260	0.648*	0.598**	0.274
Herf. adj.	0.683**	0.694***	0.269	0.633***	0.636***	0.271	0.668*	0.618**	0.269
Entropy	0.648***	0.616***	0.578***	0.693***	0.678***	0.544	0.639**	0.660**	0.521
No. of segments	4.298***	3***	3.985***	4.855***	4***	3.849***	4.977***	3.500***	4.078***

Table 5.1c depicts the distribution of HS segments among group and non-group firms and various group, ownership and control variable characteristics. *Panel A* reveals that 38 percent of group-affiliated firms are focused whereas 41 percent of non-group firms are focused firms.[140]

Table 5.1c
Descriptive statistics
HS segments, group distribution, ownership and controls

The sample consists of 607 (350 non-group and 257 group) Indian firms (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed. *Panel A* depicts the distribution of Harmonized System (HS) segments across group and non-group firms. Details regarding HS segments are available in *Appendix 5.2. Panel B* shows the distribution of firms associated with various groups. *Group 1* firms are those firms that are affiliated to groups consisting of two and less listed firms. *Group 2* firms are those firms affiliated to groups consisting of three to four listed firms. *Group 3* firms are those firms that are affiliated to groups consisting of five or more listed firms. *Panel C* depicts the descriptive statistics pertaining to various ownership variables segregated into group and non-group. *Panel D* shows descriptive statistics of the principal control variables. These variables are as defined in *Appendix 5.1.* The equality of means, medians and variances is tested using t-test, Wilcoxon/Mann-Whitney and F-test respectively. The asterisks *, **, *** denote significance at 10 percent, 5 percent and 1 percent levels respectively.

Panel A
Distribution of HS segments

Number of segments	***Non-Group Firms***		***Group Firms***		***Total***	
	Number	% of total	Number	% of total	Number	% of total
1	94	26.86	44	17.12	138	22.73
2	84	24.00	53	20.62	137	22.57
3	54	15.43	39	15.18	93	15.32
4	39	11.14	32	12.45	71	11.70
5	31	8.86	21	8.17	52	8.57
6	17	4.86	13	5.06	30	4.94
7	14	4.00	12	4.67	26	4.28
8	7	4.86	9	5.06	16	4.94
9	4	1.14	8	3.11	12	1.98
10	1	0.29	4	1.56	5	0.82
11	0	0.00	4	1.56	4	0.66
12	2	0.57	5	1.95	7	1.15
13	2	0.57	1	0.39	3	0.49
14-15	0	0.00	6	2.33	6	0.99
16-24	1	0.29	6	2.33	7	1.15
Total	350	100.00	257	100.00	607	100.00

[140] This based on the definition of focused as upto 2 segments. An alternative definition would be to consider a firm as focused if its operations are confined to 1 segment. As per this definition, 17 percent of group-affiliated firms and 27 percent of non-group firms are focused.

Panel B shows the distribution of firms and groups among the sub-sample consisting of group affiliated firms. The panel depicts that 151 firms out of the total of 257 firms (or 58.75 percent of firms) belong to *Group 1* (two or less listed firms), whereas 62 (or 24.12 percent of firms) belong to *Group 2* (three or four listed firms) and 44 firms (or 17.12 percent of firms) belong to *Group 3* (five or more listed firms).

Panel B

Distribution of firms associated with various groups

Group size	***Firms***		***Groups***	
	Number	*% of total*	*Number*	*% of total*
Group1	151	59.00	109	0.80
Group2	62	24.00	19	0.14
Group3	44	17.00	8	0.06
Total	257	100.00	136	100.00

As far the numbers of groups are concerned, 109 out of the total of 136 groups (or 80.15 percent of groups) are small groups. There is much smaller proportion of moderately sized and large groups. There are 19 moderately sized groups that represent 13.97 percent of the total number of groups and 8 large groups which represent 5.88 percent of the sample. These figures compare favorably with Khanna and Palepu (2000b). Their study reports 77.40 percent, 15.27 percent and 7.33 percent firms in the least, intermediate and most diversified business group categories.

Panel C shows the various ownership variables used in the study. Statistically significant differences are observed between most of the mean (median) values of group-affiliated and independent firm ownership variables. In particular, two ownership variables are of interest, Domestic corporate ownership and director ownership. Domestic corporate ownership among group-affiliated firms substantially represents inter-corporate group ownership in the nature of cross-holdings or pyramidal ownership (or group control), while among independent firms these represent outside block holdings. Among group-affiliated firms domestic corporate ownership represents indirect holdings through which the controlling members in the group exert control. Domestic corporate ownership is significantly higher among group-affiliated firms than independent firms. Mean (Median)

values are 38.68 (39.28) among group-affiliated and 22.76 (18.04) among independent firms. In contrast, director ownership is significantly lower among group-affiliated firms than independent firms. Mean (Median) values are 7.70 (2.08) among group-affiliated and 23.35 (20.24) among independent firms.

Panel C

Ownership variables

Variables	***Group***			***Non-Group***		
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.
FORC	3.118	0.000	8.774	2.406	0.000	8.137
FORI	1.687***	0.000	4.456***	0.707	0.000	3.075
DOMC	38.680***	39.280***	20.683	22.763	18.035	19.998
DOMI	10.211***	5.580***	11.295***	4.897	1.005	7.597
DIR	7.701***	2.080***	12.658***	23.350	20.235	19.917

Finally, *Panel D* presents the descriptive statistics of some of principal control variables used in the study. The control variables depict a wide dispersion in age, sales and leverage characteristics among the firms in the sample.

Panel D

Principal control variables

Variables	Mean	Median	Maximum	Minimum	Std. Dev.
AGE	22.362	16	110	2	16.484
SALES (Mil. of Rs.)	2707.052	696.400	158471.600	3.000	930.050
LEVERAGE	0.549	0.502	2.800	0.000	0.414

The sample of firms is distributed across a wide range of industries. Details pertaining to industry distribution are depicted in *Table 5.2*

Table 5.2
Sample industry distribution

The sample consists of 607 (350 non-group and 257 group) Indian firms (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed. Industries are classified on the basis of the US Standard Industrial Classification (SIC) system.

Industry	Number of firms	Percentage of sample
Manufacturing (SIC 35 and 39)	120	19.77
Chemical and allied products (SIC 28)	139	22.90
Textile Mill products (SIC 22)	73	12.03
Electric and other electronic equipment (SIC 36)	45	7.41
Primary Metal Industries (SIC 33)	57	9.39
Food and Kindred products (SIC 20)	54	8.90
Transportation Equipment (SIC 37)	27	4.45
Paper (SIC 26)	29	4.78
Stone, Clay and Glass products (SIC 32)	23	3.79
Metal and Mining, Oil and Gas extraction and Petroleum and Coal products (SIC 10, 13, 29)	13	2.29
Rubber and Miscellaneous plastic products (SIC 30)	13	2.14
Leather and leather products (SIC 31)	7	1.15
Non-metallic minerals (SIC 14)	3	0.49
Agriculture (01, 02, 07, 08 and 09)	4	0.66
Total	607	100

Table 5.3a
Pearson correlation matrix
Full sample correlations

The sample consists of 607 Indian firms (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed. Herfindahl index is measured by $\Sigma_i P_i^2$, Herfindahl adjusted by $\Sigma_i P_i^2 / (\Sigma_i P_i)^2$, Entropy by $\Sigma_i P_i \log(1/P_i)$ and number of segments by the count of the number of non-zero segments in each firm. P_i is the proportion of segment sales over total sales of the firm. The Diversification dummy is based on the median number of segments. Firms with up to two segments are classified as focused and firms with three and more HS segments are classified as diversified. The diversified firms are coded as one and the focused firms as zero. Details regarding HS segments are available in *Appendix 5.2.* All other variables are as defined in *Appendix 5.1.*

	Herf.	*Herf. adj.*	*Entropy*	*LOG NSEG*	*Divdum*	*FORC*	*FORI*	*DOMC*	*DOMI*	*DIR*	*LOG AGE*	*LOG SALES*	*LEV*	*ROA*	*Q*
Herf.	1														
Herf.adj.	0.98	1													
Entropy	-0.89	-0.89	1												
LOGNSEG	-0.74	-0.74	0.79	1											
DivDum	-0.63	-0.63	0.64	0.83	1										
FORC	-0.34	-0.03	0.01	-0.02	0.01	1									
FORI	-0.09	-0.04	0.05	0.046	0.01	0.06	1								
DOMC	-0.05	-0.05	0.07	0.11	0.06	-0.08	-0.01	1							
DOMI	-0.15	-0.15	0.19	0.24	0.16	-0.01	0.11	0.04	1						
DIR	0.11	0.11	-0.12	-0.13	-0.07	-0.15	-0.13	-0.51	-0.31	1					
LOG AGE	-0.23	-0.22	0.25	0.33	0.25	0.04	0.08	0.18	0.36	-0.15	1				
LOG SALES	-0.28	-0.27	0.32	0.43	0.34	0.08	0.25	0.27	0.40	-0.20	0.44	1			
LEVERAGE	0.06	-0.06	-0.07	-0.07	-0.01	-0.02	-0.06	0.01	0.07	-0.12	-0.03	-0.68	1		
ROA	-0.01	-0.01	0.02	0.07	0.04	0.11	0.11	0.04	-0.04	0.08	0.13	0.35	-0.42	1	
Q	0.06	0.07	-0.07	-0.10	-0.11	0.08	0.30	0.01	-0.01	-0.01	0.07	0.04	0.10	0.19	1

All correlations greater than or equal to 0.10 are significant at 5 % level

Table 5.3b
Pearson correlation matrix
Group sample correlations

The sample consists of 257 Indian group-affiliated firms (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed**.** The Herfindahl index is measured by $\Sigma_i P_i^2$, Herfindahl adjusted by $\Sigma_i P_i^2 / (\Sigma_i P_i)^2$, Entropy by $\Sigma_i P_i \log(1/P_i)$ and number of segments by the count of the number of non-zero segments in each firm. P_i is the proportion of segment sales over total sales of the firm. Diversification dummy is based on the median number of segments. Firms with up to two segments are classified as focused and firms with three and more HS segments are classified as diversified. The diversified firms are coded as one and the focused firms as zero. Details regarding HS segments are available in *Appendix 5.2.* All other variables are as defined in *Appendix 5.1.*

	Herf.	*Herf. adj.*	*Entropy*	*LOG NSEG*	*Divdum*	*FORC*	*FORI*	*DOMC*	*DOMI*	*DIR*	*LOG AGE*	*LOG SALES*	*LEV*	*Gr1*	*Gr2*	*Gr3*	*ROA*	*Q*
Herf.	1																	
Herf.adj..	0.97	1																
Entropy	-0.86	-0.87	1															
LOGNSEG	-0.73	-0.74	0.81	1														
DivDum	-0.65	-0.66	0.65	0.81	1													
FORC	-0.11	-0.11	-0.13	-0.15	-0.13	1												
FORI	-0.03	-0.02	0.03	0.06	0.01	0.04	1											
DOMC	-0.02	-0.02	-0.03	0.02	-0.02	-0.13	-0.12	1										
DOMI	-0.15	-0.14	0.19	0.25	0.13	-0.12	0.05	-0.10	1									
DIR	0.09	0.07	-0.05	-0.10	-0.02	-0.13	-0.07	-0.36	-0.25	1								
LOG AGE	-0.18	-0.16	0.19	0.29	0.15	0.05	0.08	0.05	0.37	-0.04	1							
LOG SALES	-0.22	-0.21	0.28	0.39	0.27	0.06	0.29	0.14	0.34	-0.16	0.30	1						
LEVERAGE	0.11	0.12	-0.14	-0.19	-0.13	-0.07	-0.15	-0.11	0.01	-0.06	-0.08	-0.27	1					
Gr1	0.07	0.06	-0.02	-0.08	-0.05	-0.07	0.07	-0.20	-0.13	0.36	-0.08	-0.16	0.08	1				
Gr2	-0.07	-0.07	0.04	0.05	0.05	0.11	-0.10	0.08	0.06	-0.19	0.05	0.06	-0.05	-0.67	1			
Gr3	-0.01	-0.01	-0.01	0.05	0.01	-0.04	0.03	0.18	0.11	-0.26	0.04	0.15	-0.05	-0.54	-0.26	1		
ROA	0.01	0.01	0.03	0.07	0.01	0.24	0.13	0.09	-0.12	-0.04	0.02	0.24	-0.53	-0.05	0.03	0.02	1	
Q	0.11	0.13	-0.14	-0.15	-0.15	0.25	0.35	-0.11	-0.05	0.01	-0.04	0.04	0.33	-0.02	-0.05	0.07	0.16	1

All correlations greater than or equal to 0.13 are significant at 5 % level

Table 5.3a shows correlation statistics for the whole sample, while *Table 5.3b* depicts these statistics for group-affiliated firms and for variables of specific concern to group-affiliated firms only.

5.5 Results and discussion

Tables 5.4a and 5.4b present the results of the specification examining the impact of firm level diversification and performance (*Hypothesis 1*). *Table 5.4a* presents the results with ROA as the dependent variable while *Table 5.4b* presents the results with Q as the dependent variable.

Models (1) to *(5)* of *Table 5.4a* depict the impact of different constructs of firm diversification on ROA. The results of all the models show an inverse relation between firm diversification and performance. In other words, higher levels of diversification lead to a lowering of firm performance.

Similar results are obtained in *Table 5.4b* wherein the dependent variable is Q. *Models (1)* to *(5)* consistently depict an inverse relationship between firm diversification and performance.

The results of *Tables 5.4a* and *5.4b* therefore provide strong evidence that more diversification destroys firm value and confirm *Hypothesis 1.*

Table 5.4a
Firm performance measured by ROA

The table represents OLS regressions of ROA on various diversification measures and control variables. The sample consists of 607 Indian firms (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed. Return on Assets (ROA) is defined as the operating profit before depreciation, taxes, interest and other amortization charges over total assets. ROA is winsorized at the 1 percent and 99 percent levels. The Herfindahl index is measured by $\Sigma_i P_i^2$, Herfindahl adjusted by $\Sigma_i P_i^2 / (\Sigma_i P_i)^2$, Entropy by $\Sigma_i P_i \log(1/P_i)$ and number of segments by the count of the number of non-zero segments in each firm. P_i is the proportion of segment sales over total sales of the firm. Diversification dummy is based on the median number of segments. Firms with up to two segments are classified as focused and firms with three and more segments are classified as diversified. The diversified firms are coded as one and the focused firms as zero. Details regarding HS segments are available in *Appendix 5.2.* All other variables are as defined in *Appendix 5.1.* The asterisks *, **, *** denote significance at 10 percent, 5 percent and 1 percent levels respectively. All regression results are corrected for heteroskedasticity using White heteroskedasticity consistent standard errors and covariance. The intercept is included in all specifications but is not reported.

Variable	(1)	(2)	(3)	(4)	(5)
Herfindahl	5.889***				
Herfindahl adjusted		5.912***			
Entropy			-7.065***		
LOGNSEG				-1.972***	
Diversification Dummy					-2.165**
Foreign corporations	0.116*	0.116*	0.112*	0.106	0.114*
Foreign institutions	0.036	0.035	0.036	0.023	0.030
Domestic corporations	0.013	0.013	0.015	0.014	0.015
Domestic institutions	-0.183***	-0.182***	-0.177***	-0.180***	-0.184***
Directors	0.054*	0.055*	0.057*	0.056**	0.060**
Log Age	0.364	0.344	0.359	0.483	0.031
Log Sales	3.112***	3.108***	3.137***	3.223***	3.109***
Leverage	-11.230***	-11.273***	-11.290***	-11.251***	-11.060***
Group dummy	-2.545***	-2.480***	-2.419***	-2.586**	-2.610***
Industry dummies	Included	Included	Included	Included	Included
Adjusted R^2	0.336	0.336	0.337	0.334	0.330
F-statistic	11.231***	11.250***	11.248***	11.138***	10.953***

Table 5.4b
Firm performance measured by Q

The table represents OLS regressions of Q on various diversification measures and control variables. The sample consists of 607 Indian firms (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed. Q is defined as the sum of the market value of equity and the book value of debt over total assets. Q is winsorized at the 1 percent and 99 percent levels. The Herfindahl index is measured by $\Sigma_i P_i^2$, Herfindahl adjusted by $\Sigma_i P_i^2 / (\Sigma_i P_i)^2$, Entropy by $\Sigma_i P_i \log(1/P_i)$ and number of segments by the count of the number of non-zero segments in each firm. P_i is the proportion of segment sales over total sales of the firm. Diversification dummy is based on the median number of segments. Firms with up to two segments are classified as focused and firms with three and more segments are classified as diversified. The diversified firms are coded as one and the focused firms as zero. Details regarding HS segments are available in *Appendix 5.2.* All other variables are as defined in *Appendix 5.1.* The asterisks *, **, *** denote significance at 10 percent, 5 percent and 1 percent levels respectively. All regression results are corrected for heteroskedasticity using White heteroskedasticity consistent standard errors and covariance. The intercept is included in all specifications but is not reported.

Variable	(1)	(2)	(3)	(4)	(5)
Herfindahl	0.343**				
Herfindahl adjusted		0.328**			
Entropy			-0.439**		
LOGNSEG				-0.170***	
Diversification Dummy					-0.202**
Foreign corporations	0.014***	0.014***	0.014**	0.013**	0.014**
Foreign institutions	0.074***	0.074***	0.074***	0.073***	0.074***
Domestic corporations	0.002	0.002	0.002	0.002	0.002
Domestic institutions	-0.001	-0.001	-0.001	-0.001	-0.002
Directors	0.003	0.003	0.003	0.003	0.004
Log Age	-0.008	-0.009	-0.007	0.009	-0.004
Log Sales	0.110***	0.109***	0.113***	0.126***	0.118***
Leverage	0.869***	0.867***	0.864***	0.863***	0.880***
Group dummy	-0.440***	-0.436***	-0.431***	-0.443***	-0.445***
Industry dummies	Included	Included	Included	Included	Included
Adjusted R^2	0.417	0.417	0.418	0.420	0.417
F-statistic	15.463***	15.449***	15.500***	15.644***	15.529***

Tables 5.5a and 5.5b present the results of the impact of group affiliation on the relationship between firm level diversification and performance (*Hypothesis 2a*). *Table 5.5a* presents the results with ROA as the dependent variable. *Models (1)* to *(5)* are regressions performed on the sub-sample consisting of group-affiliated firms. All models depict an insignificant impact of firm diversification on performance. The results are not supportive of *Hypothesis 2* that among group-affiliated that the net benefits and costs of firm diversification significantly influence firm performance.[141]

The insignificant results could be suggestive of the fact that the benefits and costs of diversification by group-affiliated firms cancel out each other or alternatively it could indicate that there are aspects of group heterogeneity which are not captured by *Specification (1).* The results employing Q as the performance measure also depict that among group-affiliated firms, firm diversification has an insignificant influence on firm performance. While these results are consistent with the ROA results, there are once again not supportive of *Hypothesis 2*.

Models (6) to *(10)* investigate the influence of diversification on firm performance among independent firms. In contrast to the models examining group-affiliated firms, *Models (6)* to *(10)* depict a significant inverse relation between firm diversification and performance.

Table 5.5b presents the results with Q as the independent variable. As before, separate models examine the diversification-performance relationship between group-affiliated and independent firms. While the direction of the influence of the various diversification measures of all models remains similar to those in *Table 5.5a*, they are not significant.

[141] We also explored specifications in which instead of segregating the sample into group and non-group, we interacted the diversification measure with a group dummy. In all cases, the interaction term remained insignificant. These results are not reported.

Table 5.5a
Firm performance measured by ROA segregated by group and non-group

The table represents OLS regressions of ROA on various diversification measures and control variables. The sample consists of 257 group firms and 350 non-group (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed. Return on Assets (ROA) is defined as the operating profit before depreciation, taxes, interest and other amortization charges over total assets. ROA is winsorized at the 1 percent and 99 percent levels. The Herfindahl index is measured by $\Sigma_i P_i^2$, Herfindahl adjusted by $\Sigma_i P_i^2 / (\Sigma_i P_i)^2$, Entropy by $\Sigma_i P_i \log(1/P_i)$ and number of segments by the count of the number of non-zero segments in each firm. P_i is the proportion of segment sales over total sales of the firm. Diversification dummy is based on the median number of segments. Firms with up to two segments are classified as focused and firms with three and more segments are classified as diversified. The diversified firms are coded as one and the focused firms as zero. Details regarding HS segments are available in *Appendix 5.2*. All other variables are as defined in *Appendix 5.1*. The asterisks *, **, *** denote significance at 10 percent, 5 percent and 1 percent levels respectively.. All regression results are corrected for heteroskedasticity using White heteroskedasticity consistent standard errors and covariance. The intercept is included in all specifications but is not reported.

	Group					**Non-Group**				
Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Herfindahl	2.637					6.923***				
Herf.adj.		2.737					6.748***			
Entropy			-0.797					-4.496***		
LOGNSEG				-0.475					-3.002***	
DivDum					-1.419					-2.833**
Forc	0.227***	0.226***	0.231***	0.232***	0.227***	-0.056	-0.055	-0.055	-0.073	-0.069
Fori	0.065	0.066	0.066	0.064	0.062	0.080	0.075	0.081	0.044	0.056
DOMC	0.018	0.018	0.021	0.020	0.019	0.007	0.006	0.011	0.013	0.010
Domi	-0.135**	-0.135**	-0.133**	-0.133	-0.135**	-0.225***	-0.223***	-0.218***	-0.228**	-0.226**
DIR	0.004	0.005	0.009	0.008	0.009	0.052	0.051	0.053	0.052	0.056
Log Age	-0.680	-0.697	-0.758	-0.717	-0.755	0.835	0.816	0.966	1.068	0.858
Log Sales	1.261**	1.265**	1.249**	1.259**	1.308**	4.053***	4.039***	4.092***	4.269***	4.089***
Leverage	-13.649***	-13.688***	-13.644***	-13.663***	-13.684***	-10.487***	-10.501***	-10.450***	-10.352***	-10.124***
Industry dummies	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
Adj R^2	0.347	0.348	0.345	0.345	0.347	0.373	0.373	0.379	0.378	0.368
F-statistic	6.235***	6.246***	6.188***	6.177***	6.238***	8.702***	8.684***	8.900***	8.860***	8.543***
No. of Obs.	257	257	257	257	257	350	350	350	350	350

Table 5.5b
Firm performance measured by Q segregated by group and non-group

The table represents OLS regressions of Q on various diversification measures and control variables. The sample consists of 257 group firms and 350 non-group (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed. Q is defined as the sum of the market value of equity and the book value of debt over total assets. Q is winsorized at the 1 percent and 99 percent levels. The Herfindahl index is measured by $\Sigma_i P_i^2$, Herfindahl adjusted by $\Sigma_i P_i^2 / (\Sigma_i P_i)^2$, Entropy by $\Sigma_i P_i \log(1/P_i)$ and number of segments by the count of the number of non-zero segments in each firm. P_i is the proportion of segment sales over total sales of the firm. Diversification dummy is based on the median number of segments. Firms with up to two segments are classified as focused and firms with three and more segments are classified as diversified. The diversified firms are coded as one and the focused firms as zero. Details regarding HS segments are available in *Appendix 5.2.* All other variables are as defined in *Appendix 5.1.* The asterisks *, **, *** denote significance at 10 percent, 5 percent and 1 percent levels respectively. All regression results are corrected for heteroskedasticity using White heteroskedasticity consistent standard errors and covariance. The intercept is included in all specifications but is not reported.

Variable	**Group**					**Non-Group**				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Herfindahl	0.154					0.198				
Herf. adj.		0.187					0.177			
Entropy			-0.113					-0.144		
LOGNSEG				-0.086					-0.155	
DivDum					-0.120					-0.219
Forc	0.019**	0.019**	0.019**	0.019**	0.019**	0.005	0.005	0.005	0.005	0.005
Fori	0.046*	0.046*	0.045*	0.045*	0.045*	0.109***	0.109***	0.109***	0.107***	0.107***
DOMC	0.001	0.001	0.001	0.001	0.001	0.003	0.003	0.003	0.003	0.003
Domi	-0.003	-0.003	-0.002	-0.002	-0.004	-0.003	-0.003	-0.003	-0.003	-0.003
DIR	0.003	0.003	0.003	0.003	0.003	0.004	0.005	0.002	0.004	0.005
Log Age	-0.070	-0.070	-0.070	-0.060	-0.073	-0.026	-0.028	-0.022	-0.008	-0.011
Log Sales	0.061**	0.062**	0.067**	0.072**	0.067**	0.141***	0.140***	0.143***	0.157***	0.155***
Leverage	0.826***	0.783***	0.820***	0.813***	0.821***	0.881***	0.881***	0.880***	0.885***	0.902***
Industry dummies	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
Adj R^2	0.359	0.361	0.363	0.363	0.362	0.485	0.485	0.486	0.488	0.488
F-statistic	6.517***	6.551***	6.602***	6.604***	6.592***	13.173***	13.165***	13.202***	13.299***	13.318***
No. of Obs.	257	257	257	257	257	350	350	350	350	350

These results have some interesting linkages with recent empirical findings on the subject. For instance, a recent study which provides cross-country evidence of the impact of firm diversification on performance is Fauver, Houston and Naranjo (2003). They examine firms from 35 countries. These include a very wide range of firms from developed as well as developing countries. The focus of their study is to explore the link between the value of corporate diversification and international capital market integration, development, and legal systems. They find evidence that the value of corporate diversification is negatively related to the level of international capital market integration and development. Among firms in high-income countries where capital markets are well developed and internationally integrated they find that diversified firms trade at a discount relative to focused firms. In contrast, they find there is no diversification discount and in some cases even a significant diversification premium, in countries whose capital markets are less developed and segmented from international capital markets. The study also finds that the value of diversification depends in an important way on the legal system of the country in which the firm is established. The authors also suggest that the value of diversification within a country declines over time as the country's capital markets become more developed and internationally integrated.

Our results of testing *Hypothesis 1* seem to be inconsistent with the Fauver *et al.* (2003) in the sense that India is a low income country and capital markets are less well developed. As per Fauver *et al.* (2003) we should have expected to find no diversification discount or even a diversification premium among firms in India. However, the results from the various models in *Tables 5.4a* and *5.4b* consistently indicate the prevalence of a significant diversification discount among firms in India.

A closer examination segregating these firms (*Tables 5.5a and 5.5b*) into those belonging to groups and independent firms reveals that group-affiliated firms insignificantly affect performance whereas independent firms significantly lower firm profitability. While Fauver *et al*. (2003) do not examine business group effects in their study; a few studies which have explicitly examined the influence of group-affiliation on the relationship between diversification and performance have yielded different results. Claessens, Djankov, Fan, Lang (1999) examining diversification-performance from nine Asian economies (Hong Kong, Indonesia, South Korea, Japan, Malaysia, the Philippines, Singapore, Taiwan and Thailand) find a diversification discount among group-affiliated firms. However, on classifying countries on the basis their economic development they find

that group-affiliated firms belonging to less developed economies that were diversified performed better than single segment firms. On the contrary, group-affiliated firms belonging to more developed economies that were diversified destroy more (unaffiliated diversified firms were also found to destroy value in a regression specification in their study but the magnitude of the value destruction was less) value when compared to single segment firms.

Claessens, Djankov, Fan, Lang (2004), find complementary effects among East Asian firms. Using a large sample of firms from nine countries over the years 1991-96, they find an overall discount associated with diversification but no diversification discount associated with group-affiliated firms. According to Claessens *et al.,* (2004), their results appear to imply that diversification value discounts for East Asian firms are more important for independent firms than for group-affiliated firms. Claessens *et al.,* (2004) state that their result is analogous to Maksimovic and Phillips (2002) who show that the costs of diversification are highest for firms that are successful in their main line of business (i.e. focused firms). In contrast, Servaes and Lins (2002) examining group-affiliation and its impact on diversification and performance find that diversified firms trade at a discount compared to focused firms. When they divide their sample into group and non-group firms, they find that the discount is concentrated among group firms

In order to investigate if the absence of variables examining group heterogeneity are responsible for the insignificant effects of firm diversification on performance among group-affiliated firms, we examine group firms more minutely. Earlier investigations in *Chapter 4* had indicated that group size could influence the performance of firms affiliated to groups of differing sizes. Therefore, *Tables 5.6a, 5.6b and 5.6c* present the results of testing *Hypothesis 2b* introducing an aspect of group heterogeneity (firm size) into *Specification (1).*

Specification (2) employed for this purpose.[142] *Model (5)* of *Table 5.6a* depicts the results of the base line regression examining the direct effect of group size on firm

[142] To conserve space only the results of the coefficients pertaining to variables directly relevant in testing the various hypotheses are presented. All models control for ownership, age, size, leverage and industry characteristics (not reported).

performance. While the direct effect of group size is not a prime focus in our study it is nevertheless interesting to examine its influence on firm performance. The results show a significant negative impact for Small (*Group 1*) and Intermediate (*Group 2*) sized groups. Large (*Group 3*) groups had a negative influence as well but their impact was not significant. This categorization follows that used by Khanna and Palepu, (2000b) to examine diversification among Indian business groups. As stated earlier, group size in their study is trichotomized into small size, intermediate size and large size groups. Their study finds a curvilinear relationship between group size and performance with performance initially declining with group size and subsequently increasing once group size exceeds a threshold level. Another study, which employs are similar categorization is Choi and Cowing (2002) who examine diversification-performance at the group level for 25 of the largest *chaebols*. They find that a quadratic relationship exists between group profits and the number of member firms, with smaller and larger *chaebols* having higher profits than intermediate size *chaebols*. [143]

Apart from examining the direct influence of group size on firm performance, *Table 5.6a* also shows the results of *Specification (2) in Models (1)* to *(4).* These models depict the moderating effect of group heterogeneity in influencing the relationship between firm diversification and performance. *Model (1)* examines the interaction effect of firm herfindahl adjusted diversification measure and *Group 1* (small group). While, the coefficient of the diversification measure is negative (-3.567), the overall effect of the interaction coefficient (representing the diversification measure and group size) and the diversification measure is positive (-3.567 + 10.548 = 6.981). Furthermore the interaction term is significant. This implies that more firm diversification lowers performance when pursued by firms affiliated to smaller groups. This is owing to the fact that higher herfindahl adjusted values imply more focus. So, greater focus (or less diversification) is positively associated with higher performance.

[143] It is of course possible to conduct an analysis akin to Choi and Cowing (2002) investigating the impact of group size on *group* performance, but as firm performance remains the central focus in this study, performance at the group level is not examined. Moreover, the focus at the firm level facilitates comparisons with unaffiliated firms.

Table 5.6a

The influence of Group size and its moderating role in the relationship between firm diversification and performance: Herfindhal adjusted regressions

The table represents OLS regressions of ROA on the Herfindahl adjusted diversification measure, interaction terms and control variables. The sample consists of 607 (257 group and 350 non-group) firms (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed. Return on Assets (ROA) is defined as the operating profit before depreciation, taxes, interest and other amortization charges over total assets. ROA is winsorized at the 1 percent and 99 percent levels. Herfindahl adjusted is measured by $\Sigma_i Pi^2 / (\Sigma_i P_i)^2$ wherein P_i is the proportion of segment sales over total sales of the firm. Details regarding HS segments are available in *Appendix 5.2. Gr 1* firms are those firms that are affiliated to groups consisting of two and less listed firms. *Gr 2* firms are those firms affiliated to groups consisting of three to four listed firms. *Gr 3* firms are those firms that are affiliated to groups consisting of five or more listed firms. *Herfindahl adjusted*Gr 1, Herfindahl adjusted*Gr 2 and Herfindahl adjusted*Gr 3* represent the interaction terms consisting of the Herfindahl adjusted diversification measure and the various group size categories. All other variables are as defined in *Appendix 5.1.* The asterisks *, **, *** denote significance at 10 percent, 5 percent and 1 percent levels respectively. All regression results are corrected for heteroskedasticity using White heteroskedasticity consistent standard errors and covariance. The intercept, controls for ownership, leverage, age and industry are included in all specifications and models but are not reported to conserve space.

Dependent variable: ROA

Variable	**Group**			**Full Sample**	**Group size** Full Sample
	(1)	(2)	(3)	(4)	(5)
Herfindahl adjusted	-3.567	4.967	3.718	6.140***	5.917***
*Herfindahl adjusted*Gr1*	10.548**			3.801	
*Herfindahl adjusted*Gr2*		-9.221**		-8.259*	
*Herfindahl adjusted*Gr3*			-6.285	-4.258	
Gr1	-6.542*	0.487		-4.965*	-2.393**
Gr2	-0.582	5.482	-0.791	2.742	-2.485**
Gr3			3.665	-0.163	-3.003
Adj R^2	0.357	0.350	0.344	0.336	0.334
F-statistic	5.894***	5.746***	5.624***	9.780***	10.516***
No .of Observations	257	257	257	607	607

In contrast, the results of *Model (2)* paint a different picture. *Model (2)* shows a positive coefficient (4.967) of the diversification measure but a negative coefficient of the interaction term consisting of the diversification measure and *Group 2* (Intermediate group). The overall effect of the interaction coefficient and the diversification measure associated with firms affiliated to intermediate sized groups is negative (4.967 - 9.221 = -4.254) and the interaction coefficient is significant. In other words, more firm diversification generates higher peformance when the firm is affiliated to an intermediate sized group. A similar result holds in *Model (3)* which depicts the interaction of firm diversification and the largest groups (overall effect of the diversification measure is negative) although the coefficient of the interaction term is not significant in this model. Finally, *Model (4)* depicts the full model with all the interaction terms included. The coefficient of the interaction term between the firm Herfindahl adjusted diversification measure and the intermediate sized/diversified group is negative and significant which is similar to the effect of the same interaction coefficient as observed in *Model (2).*

Tables 5.6b and *5.6c* depict the results of *Specification (2)* using alternative measures of diversification such as entropy and the count of the number of business segments in the firms. As can be gauged from *Models (1)* to *(5)*, the results are qualitatively similar.[144] Once again the interaction term representing the diversification measure and the smallest group size is negative and significant. The overall effect of the coefficients of the main and interaction terms is negative, indicative once again that higher levels of diversification lower firm performance (*Model (1)*). However, for the intermediate sized and large sized groups, while the coefficients of the interaction terms are positive, they are not significant *(Models (2) and (3)). Model (4)* with all interaction terms depicts a positive and significant effect for the interaction term representing intermediate sized groups and the entropy diversification measure. While the overall pattern is indicative of a differential effect between groups of various sizes, the lack of significant results consistently across all models lends only weak support for *Hypothesis 2b.*

[144] The results pertaining dummy measure of diversification and the unadjusted herfindahl index were also used and are reported in the *Section 5.6*

Table 5.6b
The influence of Group size and its moderating role in the relationship between firm diversification and performance: Entropy regressions

The table represents OLS regressions of ROA on the Entropy diversification measure, interaction terms and control variables. The sample consists of 607 (257 group and 350 non-group) firms (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed**.**. Return on Assets (ROA) is defined as the operating profit before depreciation, taxes, interest and other amortization charges over total assets. ROA is winsorized at the 1 percent and 99 percent levels. Entropy is measured by $\Sigma_i P_i \log (1/P_i)$ wherein P_i is the proportion of segment sales over total sales of the firm. Details regarding HS segments are available in *Appendix 5.2. Gr 1* firms are those firms that are affiliated to groups consisting of two and less listed firms. *Gr 2* firms are those firms affiliated to groups consisting of three to four listed firms. *Gr 3* firms are those firms that are affiliated to groups consisting of five or more listed firms. *Entropy*Gr 1, Entropy*Gr 2 and Entropy*Gr 3* represent the interaction terms consisting of the Entropy diversification measure and the various group size categories. The asterisks *, **, *** denote significance at 10 percent, 5 percent and 1 percent levels respectively. All other variables are as defined in *Appendix 5.1.* All regression results are corrected for heteroskedasticity using White heteroskedasticity consistent standard errors and covariance. The intercept, controls for ownership, leverage, age and industry are included in all specifications and models but are not reported to conserve space.

Dependent variable: ROA

Variable	**Group**			**Full Sample**	**Group size** Full Sample
	(1)	(2)	(3)	(4)	(5)
Entropy	3.960	-3.201	-2.943	-8.648***	-7.092***
*Entropy*Gr1*	-8.967*			0.001	
*Entropy*Gr2*		6.257		8.632*	
*Entropy*Gr3*			8.167	7.566	
Gr1	3.143	0.612		-2.171	-2.274**
Gr2	-0.574	-2.329	-0.961	-5.067**	-2.550**
Gr3			-2.896	-5.097*	-3.046
Adj R^2	0.347	0.341	0.342	0.334	0.334
F-statistic	5.693***	5.571***	5.586***	9.691***	10.517***
No .of Observations	257	257	257	607	607

Table 5.6c
The influence of Group size and its moderating role in the relationship between firm diversification and performance: Number of segments regressions

The table represents OLS regressions of ROA on the logarithm of the number of segments as the diversification measure, interaction terms and control variables. The sample consists of 607 (257 group and 350 non-group) firms (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed. Return on Assets (ROA) is defined as the operating profit before depreciation, taxes, interest and other amortization charges over total assets. ROA is winsorized at the 1 percent and 99 percent levels. The number of segments is measured by the count of the number of non-zero segments in each firm. Details regarding HS segments are available in *Appendix 5.2. Gr 1* firms are those firms that are affiliated to groups consisting of two and less listed firms. *Gr 2* firms are those firms affiliated to groups consisting of three to four listed firms. *Gr 3* firms are those firms that are affiliated to groups consisting of five or more listed firms. *LOGNSEG*Gr 1, LOGNSEG*Gr 2* and LOGNSEG**Gr 3* represent the interaction terms consisting of the logarithm of the number of segments as the diversification measure and the various group size categories. All variables other are as defined in *Appendix 5.1.* The asterisks *, **, *** denote significance at 10 percent, 5 percent and 1 percent levels respectively. All regression results are corrected for heteroskedasticity using White heteroskedasticity consistent standard errors and covariance. The intercept, controls for ownership, leverage, age and industry are included in all specifications and models but are not reported to conserve space.

Dependent variable: ROA

Variable	**Group**			**Full Sample**	**Group size** Full Sample
	(1)	(2)	(3)	(4)	(5)
LOGNSEG	1.337	-1.016	-0.849	-1.968**	-1.970***
*LOGNSEG*Gr1*	-3.061*			-0.981	
*LOGNSEG*Gr2*		2.160		1.585	
*LOGNSEG*Gr3*			2.309	1.089	
Gr1	4.317	0.406		-1.335	-2.483**
Gr2	-0.470	-3.333	-0.886	-4.707*	-2.696**
Gr3			-3.471	-4.414	-3.004
Adj R^2	0.349	0.342	0.341	0.331	0.332
F-statistic	5.736***	5.589***	5.575***	9.558***	10.409***
No .of Observations	257	257	257	607	607

Tables 5.7a, 5.7b and 5.7c present the results of testing *Hypothesis 3a* and *3b*. *Specification (3)* is employed for this purpose.[145] *Table 5.7a* depicts the relationship between firm diversification and performance wherein Herfindahl adjusted is the diversification measure. *Models (7) to (9)* depict the examination of *Specification (3)* for the full sample. The interaction term between the Herfindahl adjusted diversification measure and corporate ownership and director ownership is negative and significant in all three models. The results indicate that at higher levels of corporate and director ownership, diversifying firms significantly enhance profitability. The results using the entropy and the logarithm of the number of segments as diversification measures depicted in *Tables 5.7b* and *5.7c* are similar. This confirms *Hypothesis 3a* that corporate holdings and director holdings moderate the relationship between diversification and performance.[146] These results have an interesting parallel with the findings of Fauver *et al.* (2003). While Fauver *et al.* (2003) do not examine corporate holdings, they find that individual and institutional ownership concentration affects firm valuation differently for focused and diversified firms.

Models (1) to (3) depict the examination of *Specification (3)* but only for the sub-sample consisting of group firms. The interaction term between the herfindahl adjusted diversification measure and corporate ownership and director ownership (representing indirect and direct means of group control) is insignificant in all three models. *Tables 5.7b* and *5.7c* employ entropy and the logarithm of the number of business segments as diversification measures. Various models of *Specification (3)* are presented. The results are qualitatively similar. While the direction of the interaction terms (representing domestic corporate and director) ownership suggest a mitigating influence in that it appears to reduce the negative effect of diversification on performance, with the exception of *Model (3)* in *Table 5.7b*, the interaction terms are insignificant. Therefore, *Hypothesis 3b* which postulated the moderating influence of controlling ownership among group-affiliated firms is generally not supported.

[145] As with *Tables 5.6a, 5.6b* and *5.6c*, to conserve space only the results of the coefficients pertaining to variables directly relevant in testing the various hypotheses are presented. All models control for ownership, age, size, leverage and industry characteristics (not reported).

[146] The economic significance of the effect can be gauged by examining the change in the slope of the relationship between diversification and firm performance, at high and low levels of domestic corporate ownership (DOMC) and director ownership (DIR). This is best illustrated using *Table 5.9b* wherein a diversification dummy is used as the diversification measure. For instance, in *Model (9)* of *Table 5.9b*, at a low level of DOMC and DIR (10 %), the point estimate is –6.17, whereas for a high level of DOMC and DIR (50%), the point estimate is +5.71. This suggests a huge improvement in performance for diversified firms, at high levels of DOMC and DIR, holding other variables constant. Other models can be interpreted similarly.

In contrast, the results of *Models (4)* to *(6)* of *Table 5.7a* depict significantly negative coefficients for the interactions terms comprising of corporate ownership (representing outside block holdings) and director ownership. Moreover, the magnitudes of these interaction terms are larger among non-group firms in most models. Similar results are obtained using alternative diversification measures. Taken together, the results appear to suggest that the effects of ownership structure on the diversification-performance linkage are confined largely to independent firms. Among these firms, higher levels of ownership are associated with diversification strategies that mitigate the reduction in firm performance. [147]

[147] Lack of detailed data pertaining to the divergence between control and cash flow rights among group-affiliated firms results in us not being able undertake an examination similar to Lins and Servaes (2002) who find that the performance discount is confined to firms in which the management group ownership concentration is in the 10 to 30 percent range and when there is a substantial difference between the cash flow and control rights held by the management. Their results lend support to the 'crony capitalism' hypothesis under which entrenched insiders use the diversified firm structure to expropriate minority shareholders for their own purposes.

As with *Tables 5.6a, 5.6b and 5.6c*, a dummy measure of diversification and the unadjusted herfindahl index were also used and are reported in *Section 5.6*. Only the results of the coefficients pertaining to variables directly relevant in testing the various hypotheses are presented. All models control for ownership, age, size, leverage and industry characteristics. They are not reported.

Table 5.7*a*

***The* moderating influence of ownership structure in the relationship between firm diversification and performance: Herfindahl adjusted regressions**

The table represents OLS regressions of ROA on the Herfindahl adjusted diversification measure, interaction terms and control variables. The sample consists of 607(257 group and 350 non-group) firms (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed. Return on Assets (ROA) is defined as the operating profit before depreciation, taxes, interest and other amortization charges over total assets. ROA is winsorized at the 1 percent and 99 percent levels. Herfindahl adjusted is measured by $\Sigma_i Pi^2 / (\Sigma_i P_i)^2$ wherein P_i is the proportion of segment sales over total sales of the firm. Details regarding HS segments are available in *Appendix 5.2.* DOMC refers to the shareholding by domestic non-financial corporations while DIR refers to shareholding by directors and relatives. *Herfindahl adjusted*DOMC* and *Herfindahl adjusted*DIR* represent interaction terms consisting of the Herfindahl adjusted as the diversification measure and DOMC and DIR ownership variables. All variables are as defined in *Appendix 5.1*. The asterisks *, **, *** denote significance at 10 percent, 5 percent and 1 percent levels respectively. All regression results are corrected for heteroskedasticity using White heteroskedasticity consistent standard errors and covariance. The intercept, controls for ownership, leverage, age and industry are included in all specifications and models but are not reported to conserve space.

Dependent variable: ROA

Variable	**Group**			**Non-Group**			**Full Sample**		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Herfindahl adjusted	7.101	4.278	11.949*	11.753***	11.419***	26.802***	10.214***	8.468***	19.785***
*Herfindahl adjusted*DOMC*	-0.113		-0.176	-0.205*		-0.418***	-0.140*		-0.279***
*Herfindahl adjusted*DIR*		-0.194	-0.304		-0.205*	-0.434***		-0.162*	-0.337***
DOMC	0.103	0.020	0.220	0.159**	0.003	0.310***	0.115**	0.012	0.215***
DIR	0.004	0.144	0.144	0.054	0.198**	0.368***	0.056*	0.171***	0.299***
Adj R^2	0.348	0.348	0.353	0.377	0.376	0.393	0.340	0.339	0.336
F-statistic	6.065***	5.966***	5.980***	8.543***	8.522***	8.797***	11.049***	11.028	11.250***
No .of Observations	257	257	257	350	350	350	607	607	607

Table 5.7b

The moderating influence of ownership structure in the relationship between firm diversification and performance: Entropy regressions

The table represents OLS regressions of ROA on the Entropy diversification measure, interaction terms and control variables. The sample consists of 607(257 group and 350 non-group) firms (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed**.** Return on Assets (ROA) is defined as the operating profit before depreciation, taxes, interest and other amortization charges over total assets. ROA is winsorized at the 1 percent and 99 percent levels. Entropy is measured by $\Sigma_i P_i \log(1/P_i)$ wherein P_i is the proportion of segment sales over total sales of the firm. Details regarding HS segments are available in *Appendix 5.2.* DOMC refers to the shareholding by domestic non-financial corporations while DIR refers to shareholding by directors and relatives. *Entropy*DOMC* and *Entropy*DIR* represent interaction terms consisting of Entropy as the diversification measure and DOMC and DIR ownership variables. All variables are as defined in *Appendix 5.1.* The asterisks *, **, *** denote significance at 10 percent, 5 percent and 1 percent levels respectively. All regression results are corrected for heteroskedasticity using White heteroskedasticity consistent standard errors and covariance. The intercept, controls for ownership, leverage, age and industry are included in all specifications and models but are not reported to conserve space.

Dependent variable: ROA

Variable	**Group**			**Non-Group**			**Full Sample**		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Entropy	-8.483	3.590	-14.682**	-17.771***	-14.562***	-32.133***	-14.121***	-9.061***	-23.752***
*Entropy*DOMC*	0.175		0.255*	0.282**		0.476***	0.221***		0.359***
*Entropy*DIR*		0.199	0.357		0.195	0.447***		0.137	0.359***
DOMC	-0.024	0.022	-0.042	-0.048	0.011	-0.091	-0.034	0.014	-0.067*
DIR	0.008	0.038	-0.078	0.057*	0.012	-0.039	0.058**	0.026	-0.021
Adj R^2	0.348	0.345	0.353	0.381	0.381	0.398	0.342	0.337	0.350
F-statistic	6.064***	5.993***	5.987***	8.851***	8.687***	8.943***	11.179***	10.941***	11.199***
No .of Observations	257	257	257	350	350	350	607	607	607

Table 5.7c
The moderating influence of ownership structure in the relationship between firm diversification and performance: Number of segments regressions

The table represents OLS regressions of ROA on the logarithm of the number of segments as the diversification measure, interaction terms and control variables. The sample consists of 607(257 group and 350 non-group) firms (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed. Return on Assets (ROA) is defined as the operating profit before depreciation, taxes, interest and other amortization charges over total assets. ROA is winsorized at the 1 percent and 99 percent levels. The number of segments is measured by the count of the number of non-zero segments in each firm. Details regarding HS segments are available in *Appendix 5.2.* DOMC refers to the shareholding by domestic non-financial corporations while DIR refers to shareholding by directors and relatives. *LOGNSEG*DOMC* and *LOGNSEG*DIR* represent interaction terms consisting of logarithm of the number of segments as the diversification measure and DOMC and DIR ownership variables. All variables are as defined in *Appendix 5.1.* The asterisks **, **, **** denote significance at 10 percent, 5 percent and 1 percent levels respectively.. All regression results are corrected for heteroskedasticity using White heteroskedasticity consistent standard errors and covariance. The intercept, controls for ownership, leverage, age and industry are included in all specifications and models but are not reported to conserve space.

Dependent variable: ROA

Variable	**Group**			**Non-Group**			**Full Sample**		
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*
LOGNSEG	-2.010	-0.984	-3.697	-4.984***	-4.624***	-9.997***	-3.517***	-2.850***	-6.852***
*LOGNSEG*DOMC*	0.039		0.060	0.081*		0.149***	0.049*		0.097***
*LOGNSEG*DIR*		0.057	0.095		0.073	0.151***		0.057*	0.118***
DOMC	-0.023	0.020	-0.047	-0.065	0.014	-0.127*	-0.035	0.014	-0.083*
DIR	0.006	-0.051	-0.095	0.055*	-0.016	-0.081	0.056*	0.001	-0.058
Adj R^2	0.345	0.344	0.348	0.383	0.381	0.397	0.337	0.336	0.346
F-statistic	5.991***	5.973***	5.872***	8.740***	8.676***	8.930***	10.924***	10.904***	11.020***
No. of Observations	257	257	257	350	350	350	607	607	607

5.6 Additional analysis and robustness tests

Regression results using the unadjusted Herfindahl index and a dummy measure of diversification and are also employed for the specifications examining the moderating influence of group size. Only the results of the coefficients pertaining to variables directly relevant in testing the various hypotheses are presented. All models control for ownership, age, size, leverage and industry characteristics. They are not reported to conserve space. The results remain consistent. These are depicted in *Tables 5.8a* and *5.8b.*

Similarly, and the unadjusted Herfindahl index and a dummy measure of diversification are also used to examine specifications investigating the moderating influence of domestic corporate (DOMC) and director (DIR) ownership. As before only the results of the coefficients pertaining to variables directly relevant in testing the various hypotheses are presented. All models control for ownership, age, size, leverage and industry characteristics. They are not reported to conserve space. These are depicted in *Tables 5.9a* and *5.9b.*

Alternative measures of group size to examine the consistency of the results akin to ones used in *Chapter 4* were also employed. Escalating thresholds of group control were also used to detect changes in the moderating influence. Furthermore, alternative constructs of the diversification dummy and group size incorporating listed and unlisted group entities are examined. These results are not reported.

All Specifications/Models using Q as the performance measure were also tested for *Hypothesis 2b, 3a* and *3b.* However the relevant coefficients pertaining to diversification measures and the various interaction terms were found to be consistently insignificant. These results are not reported.

Table 5.8a

The influence of Group size and its moderating role in the relationship between firm diversification and performance: Herfindahl regressions

The table represents OLS regressions of ROA on the Herfindahl diversification measure, interaction terms and control variables. The sample consists of 607 (257 group and 350 non-group) firms (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed. Return on Assets (ROA) is defined as the operating profit before depreciation, taxes, interest and other amortization charges over total assets. ROA is winsorized at the 1 percent and 99 percent levels. The Herfindahl index is measured by $\Sigma_i P_i^2$ wherein P_i is the proportion of segment sales over total sales of the firm. Details regarding HS segments are available in *Appendix 5.2. Gr 1* firms are those firms that are affiliated to groups consisting of two and less listed firms. *Gr 2* firms are those firms affiliated to groups consisting of three to four listed firms. *Gr 3* firms are those firms that are affiliated to groups consisting of five or more listed firms. *Herfindahl*Gr 1, Herfindahl*Gr 2 and Herfindahl*Gr 3* represent the interaction terms consisting of the Herfindahl diversification measure and the various group size categories. The asterisks *, **, *** denote significance at 10 percent, 5 percent and 1 percent levels respectively. All other variables are as defined in *Appendix 5.1.* All regression results are corrected for heteroskedasticity using White heteroskedasticity consistent standard errors and covariance. The intercept, controls for ownership, leverage, age and industry are included in all specifications and models but are not reported to conserve space.

Dependent variable: ROA

Variable	**Group**			**Full Sample**	**Group size** Full Sample
	(1)	(2)	(3)	(4)	(5)
Herfindahl	-3.168	4.533	3.563	6.249***	5.971***
*Herfindahl*Gr1*	9.664**			3.434	
*Herfindahl*Gr2*		-8.474*		-8.427*	
*Herfindahl*Gr3*			-5.725	-3.857	
Gr1	-5.717*	0.525		-4.724*	-2.448**
Gr2	-0.556	4.840	-0.874	2.640	-2.567*
Gr3			3.144	-0.583	-3.063
Adj R^2	0.353	0.347	0.343	0.336	0.334
F-statistic	5.814***	5.691***	5.999***	10.573***	11.496***
No .of Observations	257	257	257	607	607

Table 5.8b
The influence of Group size and its moderating role in the relationship between firm diversification and performance: Diversification dummy regressions

The table represents OLS regressions of ROA on diversification dummy (DivDum) as the diversification measure, interaction terms and control variables. The sample consists of 607 (257 group and 350 non-group) firms (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed**.** Return on Assets (ROA) is defined as the operating profit before depreciation, taxes, interest and other amortization charges over total assets. ROA is winsorized at the 1 percent and 99 percent levels. Diversification dummy is based on the median number of segments. Firms with up to two segments are classified as focused and firms with three and more segments are classified as diversified. Details regarding HS segments are available in *Appendix 5.2.* The diversified firms are coded as one and the focused firms as zero. *Gr 1* firms are those firms that are affiliated to groups consisting of two and less listed firms. *Gr 2* firms are those firms affiliated to groups consisting of three to four listed firms. *Gr 3* firms are those firms that are affiliated to groups consisting of five or more listed firms. *DivDum*Gr 1*, *DivDum*Gr 2* and *DivDum*Gr 3* represent the interaction terms consisting of the diversification dummy as the diversification measure and the various group size categories. The asterisks *, **, *** denote significance at 10 percent, 5 percent and 1 percent levels respectively. All other variables are as defined in *Appendix 5.1.* All regression results are corrected for heteroskedasticity using White heteroskedasticity consistent standard errors and covariance. The intercept, controls for ownership, leverage, age and industry are included in all specifications and models but are not reported to conserve space.

Dependent variable: ROA

Variable				Full Sample	**Group size** Full Sample
	(1)	(2)	(3)	(4)	(5)
DivDum	1.479	-2.296	-1.871	-1.662	-2.156**
*DivDum*Gr1*	-4.657*			- 2.567	
*DivDum*Gr2*		4.114		1.393	
*DivDum*Gr3*			2.825	0.495	
Gr1	3.461	0.475		-0.918	-2.278**
Gr2	-0.561	-3.245	-0.963	-3.695*	-2.764*
Gr3			-2.372	-3.474	-3.164*
Adj R^2	0.350	0.346	0.342	0.327	0.328
F-statistic	5.760***	5.667***	5.591***	10.189***	11.186***
No .of Observations	257	257	257	607	607

Table 5.9a
The moderating influence of ownership structure in the relationship between firm diversification and performance: Herfindahl regressions

The table represents OLS regressions of ROA on the Herfindahl diversification measure, interaction terms and control variables. The sample consists of 607(257 group and 350 non-group) firms (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed. Details regarding HS segments are available in *Appendix 5.2*. Return on Assets (ROA) is defined as the operating profit before depreciation, taxes, interest and other amortization charges over total assets. ROA is winsorized at the 1 percent and 99 percent levels. Herfindahl adjusted is measured by $\Sigma_i P_i^2 / (\Sigma_i P_i)^2$ wherein P_i is the proportion of segment sales over total sales of the firm. DOMC refers to the shareholding by domestic non-financial corporations while DIR refers to shareholding by directors and relatives. *Herfindahl*DOMC* and *Herfindahl*DIR* represent interaction terms consisting of the Herfindahl as the diversification measure and DOMC and DIR ownership variables. The asterisks *, **, *** denote significance at 10 percent, 5 percent and 1 percent levels respectively. All other variables are as defined in *Appendix 5.1*. All regression results are corrected for heteroskedasticity using White heteroskedasticity consistent standard errors and covariance. The intercept, controls for ownership, leverage, age and industry are included in all specifications and models but are not reported to conserve space.

Dependent variable: ROA

Variable	**Group**			**Non-Group**			**Full Sample**		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Herfindahl	5.912	4.085	10.298	12.641***	10.912***	27.306***	10.721***	8.596***	20.254***
*Herfindahl*DOMC*	-0.088		-0.264	-0.229*		-0.439***	-0.152**		-0.339***
*Herfindahl*DIR*		-0.174	-0.147		-0.180	-0.427***		-0.159*	-0.293***
DOMC	0.079	0.019	0.121	0.172**	0.005	0.310***	0.115**	0.012	0.132***
DIR	0.003	0.129	0.190	0.055*	0.176**	0.368***	0.120**	0.161***	0.290***
Adj R^2	0.346	0.347	0.349	0.379	0.376	0.394	0.337	0.336	0.347
F-statistic	6.021***	6.039***	5.898***	8.615***	8.498***	8.839***	11.273***	11.217***	11.404***
No .of Observations	257	257	257	350	350	350	607	607	607

Table 5.9b
The moderating influence of ownership structure in the relationship between firm diversification and performance: Diversification dummy regressions

The table represents OLS regressions of ROA on the diversification dummy (DivDum) diversification measure, interaction terms and control variables. The sample consists of 607(257 group and 350 non-group) firms (defined as a firm having a foreign shareholding of less than 50 percent) listed on the Bombay Stock Exchange. Financial, utility, real estate, trading and Government (defined as firms in which the Government has a stake of 50 percent and more) firms are excluded. Annual data for the fiscal year 1999-2000 are analyzed. Return on Assets (ROA) is defined as the operating profit before depreciation, taxes, interest and other amortization charges over total assets. ROA is winsorized at the 1 percent and 99 percent levels. Diversification dummy is based on the median number of segments. Firms with up to two segments are classified as focused and firms with three and more segments are classified as diversified. The diversified firms are coded as one and the focused firms as zero. Details regarding HS segments are available in *Appendix 5.2.* DOMC refers to the shareholding by domestic non-financial corporations while DIR refers to shareholding by directors and relatives. *DivDum*DOMC* and *DivDum*DIR* represent interaction terms consisting of the diversification dummy as the diversification measure and DOMC and DIR ownership variables. The asterisks *, **, *** denote significance at 10 percent, 5 percent and 1 percent levels respectively. All other variables are as defined in *Appendix 5.1.* All regression results are corrected for heteroskedasticity using White heteroskedasticity consistent standard errors and covariance. The intercept, controls for ownership, leverage, age and industry are included in all specifications and models but are not reported to conserve space.

Dependent variable: ROA

Variable	**Group**			**Non-Group**			**Full Sample**		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
DivDum	-4.064	-2.844*	-4.296	-5.343***	-4.327***	-10.919***	-4.172***	-3.645***	-9.144***
*DivDum*DOMC*	0.066		0.069	0.108		0.185***	0.063		0.136***
*DivDum*DIR*		0.169*	0.004		0.061	0.156***		0.079*	0.161***
DOMC	-0.021	0.020	-0.022	-0.041	0.011	-0.075	-0.019	0.014	-0.056*
DIR	0.009	-0.098	-0.003	0.061*	0.023	-0.017	0.058**	0.012	-0.029
Adj R^2	0.348	0.353	0.345	0.373	0.337	0.337	0.329	0.337	0.338
F-statistic	6.066***	6.183***	5.827***	8.418***	8.277***	8.408***	10.905***	10.925***	10.994***
No .of Observations	257	257	257	350	350	350	607	607	607

5.7 Conclusions

The investigation into the relationship between firm level diversification and performance reveals that, in general, diversification strategies of firms in India appear to lower firm performance. This result is robust to alternative performance and diversification measures. The result lends strong support to those studies documenting a 'diversification discount'. Turning our attention to firm diversification among group-affiliated and independent firms we find that we observe the following: Firstly, firms affiliated to business groups are significantly more diversified than independent firms. Secondly, diversification strategies of firms which are affiliated to business groups generally have an insignificant impact on firm performance whereas the diversification strategies of independent firms significantly lower firm performance.

Within group-affiliated firms there is some evidence (albeit weak) of a differential impact. Firms affiliated to smaller groups which diversify lower performance when compared to intermediate and large sized groups. Firms affiliated to intermediate and large sized groups that diversify mitigate the reduction in firm performance and in certain instances appear to enhance firm performance.

However, while larger group size appears to have some beneficial effects for firm level diversification strategies, this does not translate into higher firm performance when the effect of group size itself on firm performance is considered. Firms affiliated to small and intermediate sized groups significantly underperform their independent counterparts, while the relationship is insignificant for large sized groups. In a nutshell, while firms' affiliated to business groups generally underperform *vis à vis* independent firms, regardless of group size, there is some evidence that greater diversification among firms affiliated to larger business groups generates superior firm performance.

Apart from the mediating effect of group-affiliation and group size, the influence of ownership structure on the diversification-performance relationship is the other focus in this study. Higher levels of corporate and director holdings significantly mitigate performance destroying firm diversification strategies. Categorizing these firms into those that are affiliated and independent reveals that the ownership structure effects are largely confined to independent firms.

Taken together, the results point to the importance of taking firm specific organizational characteristics into account when examining the influence of firm

diversification on performance. Business group-affiliation appears to insignificantly influence the performance of diversification strategies of member firms, whereas among non-group firms, domestic corporate ownership, in particular, mitigates the negative influence of firm diversification on firm performance. Focusing on the differing roles played by these ownership and organizational characteristics enables one to unearth crucial differences in the performance of diversification strategies pursued by firms and enriches our understanding on a phenomenon of vital import to firm performance.

Appendix 5.1
Variable definitions

Performance measure definitions:

Return on Assets (ROA) = Operating profit before depreciation, taxes, interest and other amortization charges over total assets

Q = Market value of equity and book value of total debt over total assets. The market value of equity is calculated using the closing value of stock prices on the last trading day of the financial year.

Diversification measure definitions:

Herfindahl: $\Sigma_i P_i^2$

Herfindahl adjusted: $\Sigma_i P_i^2 / (\Sigma_i P_i)^2$

Entropy: $\Sigma_i P_i \log(1/P_i)$

Logarithm number of segments (LOGNSEG): The logarithm of the count of non-zero HS segments in each firm

Wherein P_i is the proportion of HS segment sales over total sales of the firm

Diversification dummy (DivDum): This measure is based on the median number of HS segments. Firms with 1-2 HS segments are classified as focused and firms with 3 and more HS segments are classified as diversified. The diversified firms are coded as one and the focused firms as zero. There are 332 diversified firms and 275 non-diversified firms as per this definition.

Other independent/control variable definitions:

Group: Dummy measure of group affiliation which takes a value of one for a firm affiliated with a group and zero otherwise

Group1: Dummy measure of group affiliation for groups with two or less listed firms

Group2: Dummy measure of group affiliation for groups with three and four listed firms

Group3: Dummy measure of group affiliation for groups with five or more listed firms

FORI: Shareholding by foreign financial institutions

FORC: Shareholding by foreign non-financial corporations

DOMI: Shareholding by domestic financial institutions

DOMC: Shareholding by domestic non-financial corporations

DIR: Shareholding by directors and their relatives

Age: Years since the incorporation of the firm

Sales: Total sales of the firm

Leverage: Defined as the ratio of total debt to equity capital

Appendix 5.2
Harmonized System (HS) classification

The Harmonized System (HS) is a universal coding system adopted for commodity classification. It was developed by the World Customs Organization, Brussels, Belgium. The system is currently adopted by 179 counties and customs or economic unions that represent about 98 percent of global trade. The classification system is organized into 21 sections and 97 chapters. Each chapter is akin to a two digit industry group. Chapters are further broken down into headings similar to 4 digit industry segments. In India, the HS classification is referred to as the Indian Trade Classification (ITC) code. Companies are required to file the ITC codes of three principal products with regulatory authorities. Further information about product categories was obtained from the *Capitaline* database.

An example from Chapter 29 (Organic Chemicals) illustrates the coding system:

Chapter	Heading [148]	Description
29	2901	Acyclic Hydrocarbons
	2902	Cyclic Hydrocarbons
	2903	Halogenated derivates of Hydrocarbons
	2904	Sulphonated derivates of Hydrocarbons
	2905	Acyclic alcohols and their derivatives
	2906	Cyclic alcohols and their derivates
	2907…	Phenols…

Each heading is further subdivided. Up to the 6 digit level the coding system is universal. Beyond the six digit level individual countries subdivide the items further for customs tariff purposes.

[148] The list continues. Chapter 29 has a total of 42 headings. In total there are approximately 5000 headings (sourced from the World Customs Organization, Brussels, Belgium).

Appendix 5.3
Alternative measures of capturing relatedness

Claessens, Djankov, Fan and Lang (2003)[149] measure the degree of relatedness using vertical diversification and complementary diversification. The vertical relatedness variable measures the degree to which a firm integrates forward and/or backward into its secondary segments, given its primary segment. The complimentarity variable measures the degree to which the primary and secondary segments complement each other (forward) in marketing and distribution and/or (backward) in procurement[150]. The diversification-performance link in this study is examined within the framework of two competing hypotheses ('learning by doing' and 'misallocation of capital'). According to the 'learning by doing' hypotheses, since vertical integration involves more learning than complementary diversification, one should observe that firms in more developed countries benefit more from vertical integration, because they already utilize sophisticated technologies and may have peer firms to learn from. On the other hand, one should not observe such performance differences for complementary diversification because the degree of required learning is low. The authors also propose that 'misallocation of capital' is more likely in less developed countries. In line with these hypotheses Claessens *et al.* (2003) find that for the pooled sample, for firms from highly developed economies, firm performance is positively influenced by the vertical related measure while for less developed economies their influence on performance is negative. For the complimentarity measure the opposite is true, it negatively influences performance among highly developed economies but for less developed economies the influence of the complimentarity measure is positive.

Ferris, Kim and Kitsabunnarat (2003), investigate diversification-performance among Korean *Chaebols* over the period 1990-95. Their analysis is at the group level. Diversification measures at the group level are constructed along measures of relatedness based on the number of three digit industries operating in a group and capital expenditure-cash flow correlations of member firms within the *Chaebol*. They find that there is a value loss for diversified business groups, especially during the period from 1992-95. The value loss remains even after controlling for the relatedness for *Chaebols.* Furthermore, their results suggest that *Chaebo*l firms operating in low growth industries invest too much, resulting in an overall value loss to the group and they also find that *Chaebols* subsidize their unprofitable firms. Overall, they conclude the value loss associated with multi-segment firms in the US extends to business groups as well.

[149] The study uses a substantially similar sample as Claessens, Djankov, Fan and Lang (1999)

[150] To use example used in Claessens *et al. (*1998), "…if a car manufacturer takes over a car upholstery business, this would reflect high backward relatedness. If, in contrast, an electricity generation company takes over an electricity distribution business, this would reflect high forward relatedness. An example to forward complemenatrity is a peanut butter producer taking over (or expanding into strawberry jelly production: the two products do not use the same inputs, and are not vertically related, but that use the same distributors and marketing agents. An example of backward complementarity would be merging together a gin producer and an aspirin producer, as they use both use glass containers for their products."

CHAPTER 6

SUMMARY AND CONCLUSION

6.1 Summary

Utilizing the various theoretical bases relating to ownership, internal capital markets, diversification and business groups, both from finance and strategy domains, this dissertation has attempted to distill a better understanding of the crucial role played by the twin dimensions of ownership structure and organizational characteristics in influencing firm strategy and performance. The endeavor has resulted in advances in the literature pertaining to corporate governance in the following directions:

We have responded to calls by Hoskisson, Eden, Lau and Wright (2000) and Daily, Dalton and Cannella (2003) to adopt a multi-theoretic approach in examining the mechanisms and structures that might enhance organizational functioning particularly in emerging economies. Using a multi-theoretic approach grounded in elements of agency, resource-based and institutional theories has enabled us to discern the different and often competing goals and incentives of various shareholder categories and their consequent impact on firm performance. Moreover, several researchers such as Thomsen and Pedersen (2000); Gugler (2001) and Peng, Tan and Tong (2003) have stated that ownership type or identity represents an important but often neglected dimension in the strategic management and corporate governance literature streams. Drawing inspiration from these suggestions, we have made owner identity one of the central themes in this dissertation.

In particular, we have demonstrated that the underlying dynamics governing foreign institutional and foreign corporate shareholdings are vastly different. Apart from pure governance implications, the differential impact associated with foreign institutional ownership and foreign corporate ownership assumes relevance among the broader comity of emerging economies (which are characterized by increasing external capital inflows) especially with regard to policy debates on the merits of portfolio investments *vis à vis* direct investments and their attendant spillover effects. We also find that identity matters among domestic owners as well. Here too corporate and institutional owners have differing impacts. Domestic corporate ownership improves firm profitability, while in contrast domestic institutional owners are found to lower firm profitability.

Apart from ownership structure, business group-affiliation represents another important governance feature of particular relevance to India and many other emerging economies. While this was briefly touched upon in our investigation into corporate and director holdings associated with groups, a more in-depth examination needed to be undertaken to fully appreciate the nature of their influence on firm strategy and performance. These issues are therefore brought to the forefront and investigated at greater length in the two subsequent essays examining profit redistribution or internal resource transfers and firm diversification

The performance of firms associated with different organizational structures, be they conglomerates or business groups has been a subject of active debate recently. Various studies have explored the impact of the relative (in)efficiency of the internal capital market as a contributory factor in explaining the performance differential of conglomerates or business group firms in comparison to single segment or independent firms. In keeping with the theme of integrating ownership structure and organizational characteristics, we examine the (in)efficiency of the internal capital market among business groups and its performance implications by incorporating the influence of business group size and higher levels of interlinking ownership. Our results depict that significant resource transfers occur among group-affiliated firms and that these transfers are conditioned by controlling ownership and group size. Furthermore, an analysis of capital expenditures undertaken by group-affiliated and free standing firms seem to indicate significant deficiencies in the internal capital market allocation of financial resources, leading to the possibility that inefficient profit redistribution is a key determinant of the underperformance of group-affiliated firms, and thus providing an explanation for the observed 'business group discount'. While such transfers could represent efficient solutions for the controlling owners, the interests of some minority shareholders are harmed by the practice, as the minority shareholders of these better performing group firms presumably would prefer that their profits are either reinvested in the same firm or returned to them as dividends, rather than being used to subsidize other group firms in an effort to alleviate their financial constraints. Furthermore, research by Bhagwati (1982), Morck *et al.* (2004) leads to questions on the optimality of these transfers from a social welfare perspective. However, this is beyond the ambit of the present study.

A further arena where we embark on an exploration of the influence of ownership and organizational structure concerns the impact of diversification strategies on firm performance. While the impact of the net benefits and costs associated with diversification strategies on firm performance has been extensively investigated and

remains a highly contentious subject, there are few studies which have ventured to examine the interplay between ownership structure, business group-affiliation and the diversification-performance linkage. As Dess *et al.* (1995) recount, this reflects a significant gap in the literature, an issue that we have taken some tentative steps to address in this study. The initial findings from our analysis on the diversification strategies of firms conclusively demonstrate that diversification strategies of firms in India destroy value. However, there is a twist to this tale. A closer and more nuanced investigation unearths crucial differences in the extent of the value destruction. More precisely, for firms' affiliated to business groups, diversification appears to generally have an insignificant impact on firm performance whereas for independent firms, diversification significantly lowers firm performance. This is despite the fact that group-affiliated firms are significantly more diversified than independent firms. Across group differences matter as well. Some evidence exists that firms affiliated to smaller groups which diversify, tend to lower performance to a greater extent than intermediate and large sized groups. Furthermore, higher levels of corporate holdings appear to significantly mitigate value destroying firm diversification strategies but generally only among independent firms. Taken together, the results seem to indicate differing levels of effectiveness in mitigating or enhancing the value of a firm's diversification strategy depending on ownership and organizational characteristics.

Finally, culling together some of the results from *Chapters 4* and *5*, we find that while larger group size appears to have beneficial effects for firm level diversification strategies, this does not translate into higher firm performance when the effect of group size itself on firm performance is considered. Firms' affiliated to groups of various sizes underperform their independent counterparts. In a nutshell, while firms affiliated to business groups generally underperform *vis à vis* independent firms, regardless of group size, there is some evidence that greater diversification among firms affiliated to larger business groups creates some performance enhancements.

Overall, the findings from the investigations into the analyses pertaining to resource transfers and firm diversification provide some interesting insights enabling one to draw two tentative conclusions. Firstly, inefficient resource transfers among group-affiliated firms appear to contribute to the lowering of their performance, whereas firm diversification among group-affiliated firms has an insignificant effect on their performance. Secondly, higher domestic corporate ownership and larger group size appear to strengthen resource transfers which contribute to the lowering in their performance. In contrast, higher domestic corporate ownership and larger group size

appear to mitigate the underperformance of firm diversification strategies. These results are indicative of the twin influences of ownership structure and group-affiliation on profit redistribution and firm diversification and their consequent impact in enhancing or mitigating the overall performance discount associated with a group-affiliated firm.

6.2 Limitations

There are several limitations that permeate across the three essays. To begin with, the analysis has been conducted for a single year. This limitation was imposed by the lack of reliable data pertaining to ownership structure for multiple years. This precluded the possibility of constructing panel data sets for conducting a longitudinal analysis. The dynamics pertaining to the influence of group-affiliation variables during the pre and post- liberalization phase therefore could not be captured. Secondly, ownership at the first level is used. Current disclosure norms in India render tracing the ultimate owner an extremely arduous if not impossible task. The consequences of the divergence between cash flow and control rights on performance, redistribution and diversification remain unexplored. This has also resulted in an inability to capture business group diversity along dimensions other than group size. In particular, the consequences of the differences in influence among pyramidal and cross-holding group ownership structures remain unascertained. Thirdly, the sample of firms analyzed is restricted to listed firms to enable the use of stock-market based performance measures in addition to accounting measures and due to the superior quality of available data. This choice however does have implications on the generalizability of results beyond the domain of listed entities. Moreover, while attempts have been undertaken to incorporate the influence of unlisted firms while examining the influence of business group size, due to limitations in gathering information on the full extent of the operations of the group, there remains the possibility of a downward bias in the estimate pertaining to the number of unlisted firms which belong to a group. Fourthly, previous empirical research has raised the possibility of endogeneity in the key governance variables used in this study i.e. ownership and group-affiliation. The primary defense against a substantial concern pertaining to endogeneity lies in the manner in which groups are formed. Firms do not choose to be members of a group, instead it is the controlling family which sets up group companies. A firm switching its business group allegiance is unheard of in India. As far as ownership is concerned, ownership has been stable as far as holdings by controlling owners are concerned. A takeover code was constituted only recently and even after its adoption, instances of hostile takeovers have been relatively few. Changes in ownership is largely confined to institutional ownership, in particular to the blocks owned by

foreign institutional owners and to a lesser extent those that are widely dispersed among the public. This is attested to by the relatively small number of companies that are actively traded on the stock exchange and the low proportion of shares of these companies that comprise its free-float. Fifthly, as far the investigation into the phenomenon of profit redistribution is concerned, evidence was presented using a one-year lag. In certain cases it is possible that the effects pertaining to redistribution or resource transfers have a longer gestation period than a single year. This leads to a possible downward bias in documenting redistribution. Finally, while the Harmonized System (HS) code has a structure similar to the Standard Industrial Classification (SIC) system, the robustness of the results using comparable four-digit SIC codes is unexplored.

6.3 Extensions

In *Chapter 2* the monitoring influence of foreign and domestic corporate ownership on performance is attributed through their equity holdings. It would be interesting to complement this analysis with board level parameters such as proportions of foreign directors and insiders, director interlocks, board demographics, meeting frequency etc. In view of the improvements in disclosure norms currently being instituted it could be feasible to move beyond mere anecdotal evidence and to embark on an empirical investigation of the phenomenon. An alternative approach towards shedding further light on the process of redistribution as documented in *Chapter 4* could be to examine the sensitivity of the investment of a group firm to cash flows of the other firms in the group. However, this approach is likely to lead to meaningful results only if the full extent of the organizational characteristics of group structures is known. The analysis of firm diversification probed in *Chapter 5* lends itself to a number of further extensions. Firstly, while influence of group size on firm diversification has been explored, the impact of diversification at the group level and its implications on the diversification strategies of group-affiliated firms merits further investigation. Secondly, the nature of the diversification undertaken at the firm and group levels is not examined, i.e., whether the diversification is related or unrelated.[151] It would be particularly interesting to determine if there are differences in the levels of related and unrelated

[151] It is also possible to examine nature of diversification in terms of whether diversification is pursued by group-affiliated and independent firms through start-ups or acquisitions and to explore consequent performance differences. However, currently takeover activity in India is still in its infancy but such an investigation undoubtedly has merits once takeovers approach levels comparable to more developed economies. A similar argument applies to the level of internationalization in the diversification strategies pursued by Indian firms.

diversification among group-affiliated and independent firms and if this is related to the relative differences in the performance of the diversification strategies engaged by these two categories of firms.[152] Finally, with India along with other emerging economies in the midst of an ongoing liberalization exercise it would be fascinating to determine if there have been changes in firm diversification and group size over time. A longitudinal study could address issues pertaining to differences in the diversification strategies pursued by group-affiliated and independent firms and if and how, which of two categories of firms have adapted better as far as their diversification strategies are concerned on account of the rapidly changing competitive environment.

[152] Studies such as Ferris *et al.* (2003) and Claessens *et al.* (2004) adopt such measures to capture the degree of relatedness in diversification among firms and groups respectively. These are explained in *Appendix 5.3*

NEDERLANDSE SAMENVATTING

Dit proefschrift onderzoekt hoe de prestaties van bedrijven in India beïnvloed worden door *i*) verschillen in eigendomsstructuur, *ii*) deelname in business groepen, *iii*) de mate van winstherverdeling binnen een business groep en *iv*) strategieën van productdiversificatie. Deze kwesties worden voornamelijk beschouwd vanuit het perspectief van de aandeelhouder en niet zozeer vanuit het gezichtspunt van de 'stakeholder'. Het onderzoek kent bovendien een sterk positieve inslag, waarbij slechts incidenteel verwezen wordt naar de normatieve implicaties van de resultaten. Door gebruik te maken van verscheidene theorieën met betrekking tot eigendom, interne kapitaalmarkten, diversificatie en business groepen, zowel op het terrein van financiering als strategie, trachten we een beter inzicht te verwerven in de cruciale rol die de tweelingdimensies van eigendomsstructuur en organisatiekarakteristieken (zoals affiliatie met een business groep) in de beïnvloeding van de strategie en prestaties van bedrijven spelen. Het proefschrift draagt daarmee bij aan een uitbreiding van de 'corporate governance' literatuur in een aantal richtingen. We geven gehoor aan de oproep van Hoskisson, Eden, Lau en Wright (2000) en Daily, Dalton en Cannella (2003) om een multi-theoretische benadering toe te passen bij het bestuderen van de mechanismen en structuren die mogelijkerwijs het functioneren van organisaties, met name van die in opkomende markten, kunnen verbeteren. Het gebruik van een dergelijke multi-theoretische benadering, gebaseerd op elementen uit de agentschapstheorie ('agency theory'), 'resource-based' theorieën en institutionele theorieën, biedt ons de mogelijkheid om de verschillende en vaak concurrerende doelen en motieven van verschillende categorieën aandeelhouders te onderkennen, alsmede de hieruit voortvloeiende effecten op de prestaties van bedrijven. Bovendien beweren onderzoekers als Thomsen en Pedersen (2000), Gugler (2001) en Peng, Tan en Tong (2003) dat het type eigendom (identiteit van de eigenaars) een belangrijke dimensie vormt, maar vaak onderbelicht is gebleven in de literatuur op het gebied van strategisch management en 'corporate governance'. Geïnspireerd door deze bewering, stellen we in dit proefschrift het thema van de identiteit van de eigenaar centraal. Bovendien categoriseren we bedrijven op basis van hun affiliatie met business groepen, hetgeen gerechtvaardigd wordt door de wijdverbreide aanwezigheid van business groepen en

hun veronderstelde invloed op veel van de aspecten die in dit proefschrift onder de loep worden genomen.

Het proefschrift is opgebouwd uit een inleidend essay (*hoofdstuk 2*), drie empirische verhandelingen (*hoofdstuk 3, 4 en 5*) en conclusies (*hoofdstuk 6*). Hoofdstuk 2 bestaat uit twee delen. Het eerste deel geeft een overzicht van de 'corporate governance' literatuur, waarbij speciale aandacht wordt besteed aan de invloed van verschillende interne en externe mechanismen van goed ondernemingsbestuur. Twee van deze mechanismen, te weten de eigendomsstructuur en business groep affiliatie, vormen de rode draad van het proefschrift en worden in detail besproken. Het tweede gedeelte van het hoofdstuk bevat een korte bespreking van relevante kwesties betreffende de institutionele context in India, aangezien de drie empirische hoofdstukken in het proefschrift gemeen hebben dat ze zich concentreren op bedrijven in India. De heersende institutionele omgeving heeft een directe relatie met veel van de instrumenten van bedrijfsbestuur en is derhalve cruciaal voor een beter begrip van de evolutie van 'corporate governance' structuren in India. Na het schetsen van het institutionele kader waarbinnen 'corporate governance' in India dient te worden geanalyseerd, komen we tot de kern van het proefschrift. De focus in het onderzoek ligt op de effecten van bedrijfsspecifieke eigenschappen, zoals de eigendomsstructuur en business groep affiliatie, alsmede van kruis-subsidiëring ('cross-subsidization') en diversificatiestrategieën op de prestaties van Indiase ondernemingen. De toezichthoudende rol van verschillende groepen aandeelhouders en hun onderlinge relaties worden tegen het licht gehouden, hetgeen tot doel heeft een beter inzicht te verwerven in de bijdrage van deze 'corporate governance' aspecten aan de prestaties van bedrijven in opkomende economieën zoals India. Voor een grote steekproef van bedrijven in India worden de eigendomsstructuur, de praktijk van winstherverdeling en de strategieën gericht op diversificatie geanalyseerd in drie achtereenvolgende hoofdstukken. Deze hoofdstukken kennen een bepaalde mate van overlap, hetgeen het gevolg is van het feit dat gekozen is voor essays die ook onafhankelijk van de rest van het proefschrift gelezen kunnen worden. Hieronder volgt een korte beschrijving van de inhoud van deze essays en het afsluitende hoofdstuk.

Hoofdstuk 3 bevat een diepgaande studie naar de invloed van de eigendomsstructuur van een bedrijf op haar prestaties. In het bijzonder wordt de impact van de heterogeniteit in de identiteit van de eigenaars onderzocht middels een multi-theoretische benadering. De keuze voor een dergelijke holistische aanpak maakt het mogelijk om het geobserveerde verschil in impact van verschillende typen aandeelhouders op de prestaties van bedrijven in opkomende markten zoals India beter te begrijpen. Eerdere studies hebben geen onderscheid gemaakt tussen buitenlandse financiële instituties en buitenlandse industriële ondernemingen als aandeelhouders. Door de aggregatie van deze vermogenverschaffers tot een gemeenschappelijke categorie blijven cruciale verschillen in hun capaciteit, drijfveren en de hieruit voortvloeiende gedifferentieerde impact op de prestaties van bedrijven verborgen. Het toepassen van een benadering die zowel de eigendomsstructuur in ogenschouw neemt als rekening houdt met relevante institutionele factoren en bovendien put uit inzichten van 'resource-based' theorieën, levert een meer bevredigende verklaring voor de gedifferentieerde impact van verschillende typen vermogenverschaffers (institutionele versus industriële aandeelhouers) op het prestatieniveau van een onderneming.

We vinden dat het eerder gedocumenteerde positieve effect van buitenlands eigendom op bedrijfsprestaties voor een substantieel deel toe te schrijven is aan buitenlandse ondernemingen die, gemiddeld genomen, beschikken over een groter aandelenbelang, zich in een sterkere mate committeren en zich gedurende een langere periode betrokken voelen bij de onderneming. Tevens laten we zien dat de onderliggende dynamiek in het geval van buitenlandse institutionele investeerders zeer verschillend is van die van buitenlandse aandeelhouders uit de industriële sector. Afgezien van de directe implicaties voor bestuur, is de gedifferentieerde impact van deze twee soorten aandeelhouders relevant voor de bredere gemeenschap van opkomende economieën (die gekenmerkt worden door een groeiende instroom van extern kapitaal), met name met betrekking tot beleidsdiscussies over de voordelen van portefeuille-investeringen vis-à-vis directe investeringen en hun respectievelijke 'spillover' effecten. Bovendien laten we in het hoofdstuk zien dat de identiteit van de eigenaar tevens van belang is bij binnenlandse deelnames. Ook hier maakt het verschil of we te maken hebben met ondernemingen of met institutionele beleggers als

investeerders. In het eerste geval verbetert de winstgevendheid van een bedrijf, terwijl deze in het tweede geval juist afneemt. Deze resultaten zijn conform de voorspellingen op basis van onze multi-theoretische benadering betreffende de impact van deze verschillende categorieën aandeelhouders. Naast eigendomsstructuur is de affiliatie met een business groep een belangrijk aspect van 'governance', met name in India en andere opkomende markten. Hoewel we aan dit aspect kort aandacht besteden in het onderzoek naar bedrijven die verbonden zijn aan een groep en gekenmerkt worden door 'corporate' en 'director' eigendom, is het essentieel om dieper op deze dimensie in te gaan, teneinde de aard van de invloed van groepsaffiliatie op de strategie en prestaties van bedrijven beter in kaart te kunnen brengen. In de twee volgende hoofdstukken, die respectievelijk de herverdeling van winst (interne kapitaaloverdrachten) en bedrijfsdiversificatie behandelen, stellen we het thema van business groep affiliatie centraal en onderwerpen we de impact van deelname aan dergelijke business groepen aan een grondige analyse.

Hoofdstuk 4 bevat een gedetailleerde studie van de business groep, een veelvoorkomende organisatievorm in tal van landen, zowel in ontwikkelde als ontwikkelingslanden. Drie aspecten van business groepen worden in dit hoofdstuk onderzocht. Ten eerste bekijken we het effect van business groep affiliatie op de prestaties van ondernemingen in vergelijking tot op zichzelf staande of onafhankelijke bedrijven. Het tweede aspect betreft een unieke eigenschap van de business groep, te weten het vermogen om de interne middelen van de groep uit te buiten door deze te transfereren tussen de verschillende bedrijven die deel uitmaken van de groep. In dit hoofdstuk richten we ons op de interne kapitaalmarkt van een business groep en onderzoeken de praktijk van winstherverdeling (of kruis-subsidiëring) tussen de partners in de groep. We onderzoeken het bestaan van winstherverdeling tussen groep-geaffilieerde bedrijven en analyseren aspecten van eigendomsstructuur en groepsaffiliatie die het effect van winstherverdeling vergroten. Ten derde gaan we na of het fenomeen van winstherverdeling efficiënt is. Aangezien veel business groepen geleid worden door families, zou winstherverdeling het gevolg kunnen zijn van solidariteit tussen familieleden die elk hun eigen bedrijf managen. Essentieel is derhalve de vraag of deze solidariteit tussen familieleden het vermogen om economisch verantwoorde beslissingen te nemen aantast en dientengevolge tot een suboptimale

allocatie van middelen leidt. Omdat de efficiëntie van de allocatie van invloed is op de prestaties van individuele bedrijven die onderdeel zijn van een business groep, trachten we tenslotte te bepalen of winstherverdeling een verbetering van die prestaties stimuleert of juist in de weg staat. Het onderzoek levert hiermee een bijdrage aan de literatuur die tracht te identificeren welke oorzaken schuilgaan achter het verschil in prestaties tussen groepsbedrijven onderling alswel aan de literatuur die een antwoord probeert te formuleren op de vraag of business groepen toegevoegde waarde creëren vis-à-vis zelfstandige bedrijven.

Onze resultaten laten een consistent patroon zien waarin bedrijven die bij een groep zijn aangesloten minder presteren dan onafhankelijke of op zichzelf staande bedrijven. Het blijkt dat business groepen gekenmerkt worden door winstherverdeling en dat het effect hiervan wordt bepaald door de mate waarin bedrijven in handen zijn van ‘insiders’ alsmede door de grootte van de business groep. Zowel een hoger niveau van intern eigendom als een grotere omvang van de groep versterken het effect van winstherverdeling. Daarnaast bekijken we de kapitaaluitgaven van goed en slecht presterende bedrijven, zowel binnen als buiten business groepen. We constateren dat relatief goed presterende bedrijven in een groep een geringer deel van de middelen ontvangen dan hen op basis van hun prestaties zou toekomen, terwijl slecht presterende groepsondernemingen gesubsidieerd lijken te worden ten koste van bedrijven die een hogere winstgevendheid en een hoger rendement op het totale vermogen laten zien. Dit wijst op significante inefficiënties in de allocatie van middelen tussen groepsbedrijven onderling. De implicaties van deze uitkomst zijn tweeledig. Allereerst wordt de bewering dat de interne kapitaalmarkt van business groepen efficiënter zou zijn dan de externe kapitaalmarkt hiermee in twijfel getrokken. Daarnaast legt het de inefficiëntie van winstherverdeling onder groepsbedrijven bloot, hetgeen een mogelijke verklaring is voor de empirische bevinding dat bedrijven die deel uitmaken van een groep relatief slecht presteren in vergelijking tot zelfstandige bedrijven. Dit waargenomen verschil in prestatie houdt stand na correctie voor andere mogelijke oorzaken waardoor de prestaties in business groepen achter zouden kunnen blijven, zoals diversificatie en kapitaaloverdrachten richting ongeïdentificeerde bedrijven. De onderzoeksresultaten ondersteunen derhalve studies die de zogeheten ‘business group discount’ toeschrijven

aan inefficiënte winstherverdeling. Hoewel dergelijke overdrachten efficiënte oplossingen kunnen betekenen voor de controlerende eigenaren, worden de belangen van minderheidsaandeelhouders van goed presterende bedrijven hierdoor geschaad, daar zij er hoogstwaarschijnlijk de voorkeur aan zouden geven dat de winsten geherinvesteerd werden in hetzelfde bedrijf of aan hen werden teruggegeven als dividend, in plaats van deze te gebruiken voor de subsidiëring van slecht presterende bedrijven in de groep. Bovendien blijkt uit onderzoek van Bhagwati (1982) en Morck *et al*. (2004) dat deze overdrachten ook vanuit een welvaartsperspectief bezien niet optimaal zijn.

Hoofdstuk 5 onderzoekt de relatie tussen bedrijfsdiversificatie en bedrijfsprestaties. Zowel in het studiegebied van financiering als dat van strategie blijft deze relatie een actueel en controversieel thema. Dit is te wijten aan verschillende hypotheses en empirische bevindingen die aangeven dat bedrijfsdiversificatie zowel gunstige als schadelijke effecten kan hebben op de bedrijfsresultaten. Hoewel de netto-impact van de kosten en opbrengsten die met diversificatiestrategieën samenhangen op bedrijfsprestaties uitvoerig onderzocht zijn en een veelbesproken thema blijven, hebben slechts weinig studies getracht om de wisselwerking te doorgronden tussen bedrijfsprestaties enerzijds en eigendomsstructuur, groep-affiliatie en diversificatie anderzijds. Zoals aangegeven door Dess *et al*. (1995), weerspiegelt dit een hiaat in de literatuur. In dit proefschrift trachten we bij te dragen aan het opvullen van deze leemte. Hoewel we geen poging doen om een alternatief perspectief te bieden of om de bestaande controverse inzake het effect van bedrijfsdiversificatie te overbruggen, richten we de aandacht in dit hoofdstuk op een vaak onderbelichte maar direct relevante kwestie met betrekking tot de relatie tussen diversificatie en bedrijfsprestaties. Het betreft hier de vraag hoe organisatorische eigenschappen van een bedrijf (zoals business groep-affiliatie) en eigendomsstructuur de relatie tussen diversificatie en prestatie beïnvloeden. Dit hoofdstuk kan derhalve gezien worden als een poging om, middels het betrekken van bedrijfsspecifieke organisatie- en eigendomsvariabelen in de analyse, bij te dragen aan de bestaande kennis over de invloed van bedrijfsdiversificatie op de prestaties van ondernemingen.

Uit het onderzoek blijkt dat, in het algemeen, een hogere mate van bedrijfsdiversificatie de prestaties van bedrijven in India negatief beïnvloedt. Dit resultaat is robuust ten aanzien van alternatieve prestatie- en diversificatie-indicatoren en staaft daarmee studies die gewag hebben gemaakt van een 'diversification discount'. Echter, een nadere en meer genuanceerde beschouwing van de relatie tussen diversificatie en prestaties onder groep-geaffilieerde ondernemingen via de incorporatie van bepaalde organisatorische en eigendomskarakteristieken geeft een aanzienlijk minder duidelijke impact te zien. Het opnemen van bedrijfsspecifieke organisatiekenmerken zoals groepsaffiliatie en eigendomsstructuur in onze analyse brengt verscheidene verborgen eigenschappen aan het licht die aan de diversificatie-prestatie relatie ten grondslag liggen. Ten eerste, diversificatiestrategieën van bedrijven die participeren in business groepen hebben geen significant effect op hun prestaties, terwijl diversificatie in zelfstandig opererende bedrijven de prestaties juist doet afnemen. Dit geldt ondanks het feit dat groep-geaffilieerde bedrijven gekenmerkt worden door een substantieel hogere mate van diversificatie dan onafhankelijke bedrijven. Ten tweede blijkt uit het onderzoek dat bedrijfsdiversificatie geen uniforme impact heeft op de winstgevendheid in verschillende business groepen. We vinden dat bedrijfsdiversificatie leidt tot slechtere prestaties in kleinere business groepen. Daarentegen zijn er ook aanwijzingen, hoewel veel zwakker, dat de prestaties van bedrijven die behoren tot business groepen van een gemiddelde omvang positief beïnvloed worden door diversificatie. Ten derde, een hoger niveau van 'corporate' en 'director' eigendom vermindert substantieel de negatieve invloed van diversificatiestrategieën op de winstgevendheid. De resultaten impliceren dat het belangrijk is om rekening te houden met de organisatorische eigenschappen en eigendomsstructuur van bedrijven wanneer we de invloed van diversificatie op bedrijfsprestaties trachten te meten.

Hoofdstuk 6 geeft tenslotte een overzicht van de verschillende resultaten en beoogt via integratie van enkele van de bevindingen een totaalplaatje te schetsen en hieruit de belangrijkste boodschap te destilleren. Het bijeenbrengen van de resultaten uit *Hoofdstuk 3*, *4* en *5* leert dat verschillen in identiteit van de eigenaar, in de mate van winstherverdeling en in productdiversificatie leiden tot verschillen in prestaties onder

bedrijven in India. Kortom, de resultaten van het onderzoek wijzen op de invloed van eigendomsstructuur en business groep affiliatie (en hun interactie) op de strategiekeuze van een bedrijf en de daaruit voortvloeiende positieve danwel negatieve gevolgen voor hun ‘performance’.

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