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The Structure of Corporate Holdings and Corporate Governance: Evidence from India

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Abstract

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KEY WORDS: Business Groups, Corporate Governance, Concentrated Share Ownership, Corporate Holding Structure

JEL Classification: G15, G28, G32

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Abstract

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1 Introduction

The dynamics of executive labour market has been studied to great details in recent times. These studies provide stylized facts about the pay and incentives of Chief Executive Officers (CEO) and the board of directors. However, most of these stylized facts are based on the so-called Anglo-American structures of US (Bertrand and Mullainathan, 2001; Gabaix and Landier, 2008; Kaplan and Minton, 2012) and the UK (Murphy, 1999; Girma et al. 2008; Conyon et al. 2013). In the Anglo-American structure of capital market, investors are specialized outside entities, equity ownership is dispersed, and CEOs does not have substantial ownership rights. To what extent the stylized facts of corporate governance apply if these conditions are relaxed is under represented in the literature. A few empirical evidence exists for the governance structures in Japan (Berglöf and Perotti, 1994; Kang and Shivdasani, 1995; Classens, et al. 2002) and more recently for China (Conyon and He, 2013; Bryson et al. 2014). China and Japan is particularly interesting because of the role of the State and financial institutions in corporate governance and the concentrated shareholding.

There is very little evidence on how a firm's ownership structure impacts upon corporate governance. A popular view is that concentrated shareholding, often by the founding family, is associated with poor corporate governance (Classens, et al. 2002; Gibson, 2003; Roe, 1993). They argue that concentrated shareholding entrench managers and leads to expropriation of minority shareholders. Kaplan (1994, 1997) finds no significant difference in corporate governance outcomes between US, Germany and Japan-countries that vary widely in corporate ownership structure. However, these countries also have vastly different capital market structure, and legal and institutional frameworks. For example, La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1997) find that in countries with inefficient legal protection of shareholders' rights, concentrated shareholding is more prevalent. Therefore, such cross-country comparisons provide limited evidence on the impact of ownership structure on governance outcomes. Further, Shleifer and Yafeh (2007) provides evidence that firms with concentrated ownership is not patently value-reducing as is often perceived in a strand of corporate governance literature.

Firms should be subject to the same institutional factors in order to provide an ideal experimental setting to compare the effect of holding structure on corporate governance and performance. In this paper, we examine the impact of the different ownership structures on corporate governance outcomes by employing data from Indian listed firms as India provides a unique setting to compare different governance styles within the same institutional framework and macroeconomic structure. The governance system in India is a combination of firms with dispersed shareholding, like the US and the UK, and the insider dominated Chinese and Japanese structure. About 37% of the largest Indian firms are parts of diversified family-owned business groups, 9% are controlled by the state and about 54% are Anglo-American style stand-alone firms with dispersed equity shareholding and outside investors. Market and non-market institutions in India have evolved over a long period of time and are relatively stable, allowing for results that are comparable with extant corporate governance literature which is based predominantly on evidence from US and UK firms (Sarkar and Sarkar, 2000).

The presence of stand-alone firms with dispersed shareholding and Korean *chaebol*-type¹ business group affiliates with complex cross-holdings within the same regulatory and accounting framework allows us to overcome many shortcomings of the first generation of cross-country comparisons of corporate governance. In doing so, we also add to the nascent literature on the effectiveness of corporate governance in emerging economies.

We find that business group affiliate firms with concentrated shareholding are, on average, bigger and more profitable on some parameters than a stand-alone firm. However, there is no significant difference between the corporate governance *outcomes* in business group affiliates and in the standalone firms with dispersed shareholding. Both type exhibit similarities with the stylised facts from the Anglo-American literature on corporate governance. This is contrary to the assertions that concentrated control through crossholding is associated with efficiency loss. Our results suggest that corporate governance *outcomes* in

¹The word "*chaebol*" means "business family" or "monopoly" in Korean. The chaebol structure can encompass a single large company or several groups of companies, which is owned, controlled or managed by the same family dynasty, generally that of the group's founder. Samsung, Hyundai and LG Group are among the biggest and most prominent examples. A key governance implication of such structures is that it permits founding families to run nominally independent companies within a huge business group by owning a small but controlling interest in the parent company.

business group firms with a family-owner as the top manager are comparable to those in stand-alone firms where the CEO has limited control, but the incentive alignment *mechanisms* are different. Governance outcomes and mechanisms may have deep rooted cultural norms and more than one governance mechanism can lead to similar outcomes. Our results are consistent with the Demsetz and Lehn (1985) argument that corporate ownership varies systematically in ways that are consistent with value-maximization.

The rest of the paper is structured as follows: Section 2 provides a background to Indian corporate governance structure and relevant empirical evidence, Section 3 and 4 describes the data and econometric methods respectively. Section 5 discusses the results and section 6 concludes.

2 Institutional Background and Literature Review

The institutional framework for corporate governance in India dates back to 1875 with the setting up of the Bombay Stock Exchange (BSE). The Companies Act of 1956 was enacted to govern the activities of listed firms in India, but the industrial and the service sectors were dominated by public sector firms. It was difficult to set up and run large-scale private businesses due to bureaucratic licensing requirements, and the role of the stock markets was undermined by political influences. Due largely to the economic liberalization of 1991, there has been a shift away from the traditional interventionist approach to a more Anglo-American style of governance. Since then, India saw a major growth in listed private firms, their reliance on external sources of financing and foreign investment while the role of government diminished. La Porta et al. (1997) counts India to have the highest level of shareholder rights index at par with other English origin common law countries as well as the highest level of creditor rights. Whilst the country scores highly on the measures of investor protection due to the regulatory control of the Securities and Exchange Board of India (SEBI), these are compromised by poor enforcement and corporate corruption.

In an attempt to improve the corporate governance regulations in India, SEBI enacted Clause 49 of Listing Agreement in 2001 that is similar in spirit to the Sarbanes-Oxley Act

(SOX) of US. Clause 49 lays down a range of governance imperatives for listed firms, ranging from board composition, independence of audit committee, enhanced disclosure norms and make the CEO and the CFO personally responsible for the internal control systems. These reforms brought India further in line with developed capital markets, and have partially contributed to the increase in foreign investments. In contrast to the mixed impact of SOX on the US corporate governance, Clause 49 is reported to have a positive impact on the governance and stock market performance (Khanna and Yafeh, 2007; Chakraborty, Megginson and Yadav, 2007).

However, dispersed shareholding pattern, as is common in U.S. and U.K. are not widely prevalent in India so far. About 16% of the firms listed in BSE is wholly or significantly controlled by the government, federal and state, and 3 of the top 6 Indian firms in 2014 are public sector firms. On the other end of the spectrum, about a third of the listed firms have western-style diversified shareholding and professional managers. However, diversified business groups, mostly having a family-centric controlling stake, dominates the Indian private sector.

A common characteristics of these business groups is the presence and influence of “promoters”. The term is commonly used to mean “controlling stakeholder” and can be an individual or a family. These promoters, collectively hold about 54% of the shares in the business-group firms². Consequently, tunneling of assets can be a potential source of inefficiency and loss of profitability. Bertrand, Mehta and Mullainathan (2002) finds that business group firms are 30% more likely to suffer earnings loss during industry shocks compared to Western-style standalone firms in the same industry. Also, firms down the pyramid are less affected by shocks as their buffered using the assets of the firms nearer the top of the pyramid. This suggests that the controlling stakeholders benefits in business groups at the expense of minority shareholders. On the other hand, Khanna and Palepu (2000) find that affiliate firms of diversified business groups outperforms stand-alone firms in the same industry.

²Firms with dispersed shareholding structure may also have CEOs and board-members who are members of the founding family. However, their control over the firm is limited compared to business group affiliate firms with more concentrated shareholding and cross-holding structure.

Although Indian business groups share some characteristics of the pyramidal structures in Japanese *keiretsu*³, there are several key differences that makes it unique. Similar to *keiretsu*, individual firms within an Indian business group are legally separate entities, are primarily responsible to its own shareholders and its accounts are audited separately. However, unlike in *keiretsu* where the affiliate firms are connected and coordinated through a common group-specific bank, the affiliate firms within an Indian business groups are coordinated by interlocked boards and by members of the “promoter” family, similar to the holding structure of Korean *chaebols* (Khanna and Palepu, 2000). A typical Indian business group will have dozens of firms with complex cross-holdings. The complexity of cross holdings make it difficult to compute the conventional cash-flow rights and voting rights measures. Therefore the feasibility of studying governance *mechanisms* for such firms is restricted and the focus of this paper is to study the governance *outcomes*.

The evidence on how corporate holding structure impacts upon corporate governance is few and is mainly limited to cross-country comparisons. Kaplan (1997) finds that “market-based” governance in the US are no more effective in replacing poor performing CEOs than the “relationship-oriented” governance styles of Germany and Japan. Gibson (2003) finds that CEO turnover is not sensitive to firm performance in emerging economy firms with higher concentration of shareholding. Similar results are found by Roe (1993). However, these evidences based on pooled sample of multiple countries tend to ignore the institutional and legal frameworks which differ vastly across countries. Empirical evidence suggests that institutional and legal frameworks are significantly associated with ownership, performance and governance (see Demsetz and Lehn, 1985; La-Porta et al. 1995). Variations in regulatory frameworks and possible differences in the nature of data collection and methodology are among the major challenges to cross-country comparison of corporate governance practices (Bryson et al. 2014).

Single-country studies on how corporate holding structure on corporate governance typically focus on the differences between large and small firms (Black, et al. 2006) or between

³Keiretsu is a Japanese term describing a loose conglomeration of firms sharing one or more common denominators. The companies need not necessarily own equity in each other but is organized around a common bank. Most prominent keiretsu includes Toyota and Mitsubishi. Firms in a keiretsu can have professional managers, and outside and institutional shareholding.

foreign-holdings and domestic holdings (Patibandla, 2006). Stylized results from this branch of studies is that larger firms and firms with higher foreign institutional holdings are better governed.

Similarly, empirical evidence on corporate governance in emerging economies is very few and is mainly focused on tunneling of assets by the controlling stakeholders at the expense of the minority shareholders (Johnson et al. 2000; Bertrand et al., 2002). A few studies have examined corporate governance in emerging economies and fewer still have analyzed the impact of corporate holding structure on corporate governance outcomes. Some studies document and examine the governance structures of *keiretsu* and *chaebol*, and the impact of firm performance and CEO turnover (Berglöf and Perotti, 1994; Kang and Shivdasani, 1995). Classens et al. (1999 and 2000) study ownership and control in east-Asian firms. More recently, some evidence has emerged on the governance structure of Chinese firms (Conyon, et al. 2013; Bryson et al. 2014). They seem to suggest that some of the stylized facts of western corporate governance, is manifest in Chinese and east-Asian firms to an extent and that managerial power plays a prominent role in managerial pay setting.

There has been a few recent studies on Indian corporate governance. These studies primarily focus on the how large/controlling shareholders impact upon the governance of Indian firms. Sarkar and Sarkar (2000) finds that the large shareholding patterns have limited benefits to firm valuation. Bertrand, Mehta and Mullainathan (2002) finds evidence of significant expropriation of minority shareholders in Indian business groups. Affiliate firms of diversified business groups in India are seen have better financial performance compared to stand-alone firms with diverse shareholding (Khanna and Palepu, 2000).

However, none of the above strands of literature directly address how equity holding structure impacts upon corporate governance outcomes. We contribute to the literature by employing a novel setting in that within the same regulatory and institutional framework, we can compare the governance *outcomes* for business group firms with concentrated shareholding and private stand-alone firms with dispersed shareholding.

3 Data

3.1 Data Sources

A major challenge to comparison between corporate holding structure and governance is that corporate holding structure is often endogenous to institutional and legal frameworks of different countries. Also, the availability of reliable firm-level information on corporate governance outside the United States and Europe has so far been a suspect. Our research gathers evidence from India, where a reasonable number of comparable listed firms have two distinct types of holding structure, and the country has a mature capital market with publicly available reliable and audited financial information and industry classifications. Indian accounting standards are aligned with IFRS and US GAAP and makes it easier to verify the reliability of the information provided. Further, by 2005 all Indian listed firms adopted the recommendations of Clause-49, a Sarbanes-Oxley type governance regulation which enhances transparency and comparability of the data.

The data for this study is obtained from the Prowess database, maintained by the Centre for Monitoring the Indian Economy (CMIE). The sample of firms is the top 500 listed firms in the Bombay Stock Exchange (BSE). Collectively, these firms represent over 95% of the total market capitalization. The sample period is from 2006 to 2013. Although prior data is available, the coverage of the data is better 2006 onwards. We follow firms from the time they first enter BSE 500 within our sample period till the end of the sample period, even if it drops out of BSE 500 listings subsequently. Firms that are delisted, taken private or are acquired are lost from observation.

Our final sample is an unbalanced panel of 1008 firms with 5311 firm/year observations. Of the 1008 firms in our sample, 369 (36.61%) are affiliate firms of business groups, 98 are public sector firms and 541 (53.67%) are stand-alone firms with dispersed shareholding. We adopt CMIE's classification of group affiliation and augment it with hand collected information from publicly available sources.⁴ The affiliate firms of business groups are often connected through common family ownership and cross-holding between different group

⁴CMIE's classification is cross-referenced and augmented from the annual reports and filings of individual firms with the Bombay Stock Exchange.

firms. Public sector firms with significant government involvement and political appointments lends itself poorly to such comparisons and are hence excluded from our analysis.⁵

Throughout this text, the top executive of the firm is identified as the CEO. However, ‘Managing Director’ and ‘Chief Executive Officer’ are interchangeably used as job titles for the top executive. Prowess allows identification of the top executive of each firm throughout the sample period but doesn’t provide information on CEO characteristics like tenure, age, and whether the CEO is a member of the founding family. These information are carefully hand collected from various filings (annual reports, statutory filings with the stock exchange, etc.) of each individual firm over the sample period and press-reports. We also don’t know if the CEOs departure is forced or voluntary. The association between forced turnover and firm performance is a better measure of corporate governance. However, classification of CEO turnover as forced or otherwise is an inexact science and often relies on press report-based algorithms (Homroy, 2014; Peters and Wagner, 2014). Further, CEO dismissals are often cloaked in euphemisms and hence such classifications may not reflect the true cause of turnover. The cost of gathering and disentangling this information is costly in the Indian context. In this study we cannot differentiate between forced and voluntary turnover.

Executive compensation in India is structured in two main components- fixed salary and performance based pay. The performance based component, unlike the equity based pay prevalent in the western economies, is generally paid out in cash bonus and perquisites. Bonus commissions form about 28% of total CEO pay. The structure of the pay is similar across firms with both types of share-holding patterns.

3.2 Summary Statistics

Table 1 presents the summary statistics on Corporate Governance outcomes, firm characteristics and board characteristics. Panel A presents summary statistics for the full sample for the period 2006-2013 whereas Panels B,C, and D provides summary statistics for business groups, private stand-alone firms and public sector firms. Sales is reported in million US\$

⁵For example, CEOs or Managing Directors of public sector firms are fixed term bureaucratic appointments and the pay is contingent on tenure and rank, rather than firm performance.

and CEO pay variables are reported in ‘000 US\$.

3.2.1 Ownership Measures

In this paper we compare firms with two different corporate holding structures- firms with concentrated shareholding (*Business Group Affiliates*) and firms with dispersed shareholding (*Private Stand-Alone*). We control for ownership by the percentage of equity shares held by the promoters. As discussed above, promoters are the person/s or family who have the controlling stake in the firm. We also control for institutional shareholding by the percentage of equity shares held by financial institutions like mutual funds, banks, insurance companies and venture capital funds. From panels B and C, the mean shareholding of promoters in business groups are 57% whereas that in private stand-alone firms is 23%. Institutions like banks and insurance firms hold about 20% shares in business group affiliate firms and 16% in private stand-alone firms. These figures suggest that business group affiliates are more closely held than private stand-alone firms and the degree of control of the promoter-family is much more.

3.2.2 Firm Performance Measures

We measure firm performance using a range of indicators. We control for the size of the firm using natural log of sales. Performance is measured by return on assets and firm’s long term prospect is measured by Tobin’s-Q, approximated here by market-to book value. We use annualized measures of firm size and performance. The financial indicators are absolute performance of individual firms.

Further, we control for industry-adjusted performance to control for industry-specific heterogeneity. This was done at 2-digit SIC level. The firms in our sample belong to 21 distinct 2-digit SIC code. Table 1 provides sample statistics of firm performance measures for different types of firms. Affiliate firms of business groups are generally bigger in size with almost twice the annual sales of private firms with dispersed shareholding. However, the firm performance measures, ROA and MTBV, of the business group affiliates and private stand-alone firms are largely comparable.

On average, Indian public sector firms are more than three times larger than business group affiliated firms and they have lower MTBV and profit. Our preliminary analysis of public sector firms showed very low pay-performance sensitivity in these firms. Since these firms have very different governance structures, priorities and objectives, we drop this category of firms in subsequent analyses.

3.2.3 Corporate Governance Variables

Board size is measured by the total number of directors on the board. The mean board size for the full sample is 9.94, with a maximum of 33 and a minimum of 1. The boards of standalone firms (9.28) are smaller than the boards of business group affiliates (10.11) on an average. The independence of the board is traditionally measured by the percentage of non-executive/independent directors on board. Prowess identifies non-executive/independent directors. Where that was not the case, we manually identified the independent directors from the annual reports and find that the mean proportion of independent directors on the board of both types of firm are comparable (51% on an average). This is not surprising as Clause 49 stipulates that at least half of the board of directors must fulfil the criteria for independent directors if the chairperson is an executive director.

The traditional measure of board independence may not be sufficient in this context. In business group affiliates, large shareholding may lead to greater presence of Promoters on the board. Therefore, we identify the Promoters who hold the CEO position, and whether the CEO and Chairman positions are held by the same individual. Further, promoters hold the CEO position in 44% of business group affiliate firms. The same for private stand-alone firms is 13%.

4 Empirical Strategy

To examine and compare corporate governance *mechanisms* of firms are tricky. The presence of *chaebol*-type business groups with complex cross-holdings make it difficult to disentangle cash-flow and voting rights. Further, even though Indian corporate governance laws and

capital market structures are well developed in nominal terms, the enforcement may not always be automatic (Bertrand et al. 2002). Therefore, we study the corporate governance *outcomes* in an attempt to examine the performance of corporate governance across the two different ownership types. The outcomes we study are the pay-performance sensitivity and the relationship between CEO turnover and firm performance. This is consistent with the approach of Bryson et al (2014) and Gibson (2003) for studying corporate governance of emerging economies.

First, we examine the impact of different ownership structures on the governance outcomes in business group affiliates, and private stand-alone firms. The outcomes in themselves are not sufficient conditions to infer about the degree to which the governance mechanism is effective. However, these outcomes forms the necessary conditions for effective corporate governance and hence can be used as reliable basis of comparison.

To examine the first governance outcome, i.e. the performance sensitivity of CEO pay for Indian listed firms, we estimate the following model:

$$CEOPay = f(FirmPerformance, FirmSize, CEOcharacteristics, BoardCharacteristics) \quad (1)$$

We test whether there is a positive and significant association between CEO pay and firm performance.

$$CEOPay = f(\beta FirmPerformance + \gamma Z_{it}) \quad (2)$$

Where firm performance is measured by return on assets (ROA) and Market to Book Value (MTBV), β captures the effect of firm performance on CEO pay and Z_{it} is a vector of all control variables. We use different measures of firm performance to test the performance sensitivities of the corporate governance outcomes. This is particularly interesting since equity-linked pay forms a very small proportion of pay for Indian CEOs.

Further we examine if the performance sensitivity of affiliate firms of business groups are different from the stand-alone firms with dispersed shareholding. To do this we include an in-

indicator variable *BusinessGroupAffiliate* and an interaction variable of *BusinessGroupAffiliate*ROA*. The coefficient of the interaction variable captures the performance sensitivity of CEO pay in business group affiliate firms compared to the control group of stand-alone firms. We then analyse the baseline model separately for business group affiliates and stand-alone firms to identify if the pay-performance sensitivity varies if the CEO is the controlling shareholder or a member of the promoter family.

Next, we examine whether poor performing CEOs are more likely to be replaced in Indian firms. To test that we estimate the following

$$Probability(Turnover) = f(\beta FirmPerformance + \theta Z_{it}) \quad (3)$$

$f(\cdot)$ is a logit function and as discussed earlier, firm performance is measured in terms of ROA and MTBV, and Z_{it} is a vector of other control variables. We follow a similar empirical strategy as equation (1) to examine whether poor performing CEOs of business groups are less likely to be replaced and include indicators for group affiliates and interaction of group affiliate and firm performance, and subsequently use subsamples to test how the relationship differ if the the CEO is a member of the promoter family. Together, these two governance outcomes can indicate the nature of corporate governance in firms with different shareholding patterns.

Finally, we examine if a firm's ownership structure impacts upon the performance and the valuation of the firm. Demsetz and Lehn (1985) finds that the ownership structure of the firm doesn't significantly impacts upon the performance. To test this, we estimate the following equation:

$$FirmPerformance = f(OwnershipType + \delta X_{it}) \quad (4)$$

Where ownership type indicates whether an individual firm has dispersed shareholding or is a business group affiliate and X_{it} is a vector of all firm-level and board-level observables.

5 Results and Analysis

5.1 Corporate Holding Structure and Pay-Performance Sensitivity

To examine if different ownership structures are associated with different corporate governance outcomes, we first examine the pay-performance sensitivity of CEO pay. A priori, a firm with better governance will enforce higher performance sensitivity in paying the CEO. In Table 2, we present the results of the performance-pay regressions for the full sample. In column (1), we report the results with only the controls for firm performance and an indicator for business group affiliates. In columns (2)-(5), we progressively add the ownership measures and other firm level controls and their interactions to specification (1).

The key variable of interest is the *Business Group* indicator. This indicator is positive and statistically significant in column (1), suggesting that CEOs of business group affiliates are paid more compared to their counterparts in firms with dispersed shareholding. With the addition of other co-variates, the estimate of the *Business Group* indicator weakens in magnitude but remains statistically significant. Further, we add an interaction $ROA * BusinessGroup$ in column (4) to examine if the performance of business group affiliates have different impact on CEO pay. We find no evidence that the pay-performance sensitivity of CEOs in business group affiliates are different from that of CEOs of stand-alone firms. Finally, in column (5), we add an indicator $ROA * PromoterCEO$ to examine if the performance of firms with a family-CEO at the helm have different impact on CEO pay-performance sensitivity. There is no evidence to suggest that Promoter-CEOs have lower pay-performance sensitivity.

Therefore, it seems that the raw differences in CEO pay and pay-performance sensitivity between business group affiliates and firms with dispersed shareholding stems from the difference in ownership structure. In a professionally managed firm with dispersed shareholding, the pay-performance sensitivity of the CEO is designed for attenuating the agency problem. However, a business group-CEO can internalize the performance sensitivity through her stake in the firm.

We investigate the source of the higher average pay in business group firms. In Table 3,

we present the results by subsample of business group affiliate firms and further stratifying in columns (2) and (3) by firms with and without a promoter family CEO at the helm. Column (4) reports the results for the subsample of privately held standalone firms with dispersed shareholding. The results suggest that CEO pay is generally sensitive to firm performance, and it is worth noting that the sensitivity is particularly strong for accounting performance than MTBV. This is perhaps driven by the fact that the pay for Indian CEOs is structured such that the performance-based bonus is contingent on the accounting performance of the firm. From columns (1) and (4), the performance sensitivity of CEO pay in stand-alone firms and business group affiliates are comparable. We find no-evidence that promoter-CEOs are paid more in business group firms. Similarly, there is no evidence that Promoter-CEOs in business group affiliates with concentrated shareholding are paid more. Thus there doesn't seem to exist any statistical difference in performance sensitivity of CEO pay in firms with different ownership structures. From tables (2) and (3) we can conclude that promoter CEOs in business group firms is paid higher, but also have higher pay-performance sensitivity.

In Table 4, we present results of performance sensitivity of pay for different quartiles of firm performance. The results are similar to our baseline estimates, and there is no evidence of non-linearity or extreme values driving the baseline results. In Table 5, we present results with industry-adjusted measures of firm performance. Firm ROA is benchmarked with the median ROA of the same 2-digit industry group for that given year. Once again, the results are qualitatively similar to our baseline results.

5.2 Corporate Holding and CEO Turnover

We examine if there is any difference in performance sensitivity of CEO turnover in firms with different ownership structure, using variants of specifications summarised in equation (3). In Table 6 column (1), we present the results of the logit regressions for the full sample, and in columns (2) and (5) we present the results for business-group affiliates and private stand-alone firms separately. In these three specifications, the coefficients on firm performance measure (*ROA*) is negative and significant at the 5% level. This suggests that CEOs turnover is generally sensitive to firm performance for both the ownership structures.

Further, the difference between the point estimates of *ROA* in specifications (2) and (5) is not statistically significant. Another common attribute between the two holding structures is that promoter-CEOs are less likely to be fired compared to their professionally hired counterparts.

We break down the subsample of business group firms further into firms that have CEO from the promoter family and those that have an outside CEO in columns (3) and (4), and find that promoter family CEOs are not likely to be dismissed for poor performance. This is in contrast to the results in table (3) where we find that promoter CEOs in business group firms have higher pay-performance sensitivity. This implies the family member CEOs are mainly incentivized through higher pay for better performance (carrot-type incentives) while outside CEOs in business group firms are subject to a combination of both the carrot and the stick type incentives. This can be attributed to the fact that the promoter-CEOs internalize the consequences of poor firm performance.

In Table 7, we present results for different quartiles of firm performance and it shows that CEO turnover is more likely in the lower quartile of the performance distribution. Promoter CEOs are less likely to be fired irrespective of the holding structure. From the insignificance of the interaction *BusinessGroups * ROA* in column (1), we can conclude that performance sensitivity of turnover in business group affiliates is statistically from that of private stand-alone firms.

In Table 8, we present the results with industry-adjusted performance. The coefficient on industry-adjusted ROA is negative and significant across the three specifications and the result that CEO turnover in business groups does not have significantly different performance sensitivity from that of private stand-alone firms. It should be noted that industry adjusted ROA is more strongly associated with CEO turnover than MTBV. This is not surprising given that stock market performance in emerging economies are noisier signals of performance (Demigüç-Kunt and Levine, 1995).

Increase in proportions of independent directors and institutional shareholders increase the likelihood of CEO turnover across different ownership structures. More interestingly, concentration of shareholding by promoter family does not seem to reduce the probability of

CEO turnover for poor performance. In addition to the results of previous sub-section, this result suggests that concentration of shareholding doesn't lead to higher pay, this results suggests that concentrated equity holding of promoter family in business group affiliates serves more as a mechanism of incentive alignment than rent extraction.

In summary, our results suggest that the corporate governance *outcomes* are very similar in firms of the two different holding structures, and there is no evidence that concentrated equity ownership has worse outcomes than dispersed ownership.

5.3 Corporate Holding Structure and Firm Performance

As a final step of our analysis, we analyse the performance metrics of firms to test whether the different governance mechanisms lead to comparable performance among firms with different type of holding structures. The underlying hypothesis is based on the Demsetz and Lehn (1985) argument that the ownership structure of firms and firm performance are endogenously determined and we should not be able to establish a causal connection between them. We estimate the determinants of performance for business group firms and firms with dispersed shareholding. In columns (1), (2) and (3) of Table 9 we present the results for the full sample with three different measures of firm performance and an indicator for business group firms.

In the three specifications, the dependent variables are ROA, Tobin's-Q (approximated by the market-to-book ratio), and EPS, respectively. The central variable of interest is the *BusinessGroup* indicator. If the performance of business group firms are different from that of privately held firms with dispersed holding structure, we will expect a statistically significant coefficient on the *BusinessGroup* indicator. However, the indicator is statistically insignificant at all conventional levels for all the three measures of firm performance. These results suggest that business group firms does not underperform but firms where CEOs have concentrated share ownership display a negative association with performance, as is suggested by the negative coefficient on the indicator for promoter-CEOs. Using most recent data with clear differences in shareholding patterns, we have been able to validate

the original Demsetz and Lehn (1985) results⁶.

That the corporate holding structure is expected to have an effect on firm performance is perhaps because we expect different ownership structures to be associated with different corporate governance *mechanisms* and *outcomes*. This paper presents evidence that different corporate holding structures have similar corporate governance *outcomes*, and hence similar firm performance.

5.4 Robustness

We test the robustness of our results using different estimation techniques and sample selection. First, following the conventional practice in finance literature, we exclude all firms in the banking and financial services industry. A large proportion of firms in the banking and financial services industry are in the public sector and have been excluded to begin with. The results with the reduced sample are qualitatively similar but less precise than our baseline estimates. Second, we use panel regressions with firm-fixed effects. In doing so, we had to exclude all time invariable dummies (e.g. *Promoter CEO*) from our estimates. The key results persist with similar degree of significance. Finally, to test for performance sensitivity of CEO pay for the range of firm performance, we use splines with three equally spaced knots across the performance distribution for each year. The results firms within the 34th-67th percentile have the highest performance sensitivity of CEO pay and CEO turnover. Beyond the 67th percentile, there is no increase in performance sensitivity of governance outcomes. This is perhaps driven by the fact that the performance-sensitive component of CEO pay in Indian firms is in the form of cash bonus, which is not a monotonic function of performance.⁷

⁶To check the robustness of our results, we use the formula used by Demsetz and Lehn (1985) to calculate ownership concentration. The results suggest no significant impact of ownership structure on firm performance.

⁷A general practice in Indian firms is to have performance bonus as a stair-step function of firm performance. A stylised form would be to award no bonus for attaining up to 90% of the target, bonus= x for attaining 90-100% of the target; bonus= kx for 100-150% of target and bonus= Nkx for attaining over 150% of the target.

6 Conclusion

In this paper we use data from large Indian firms to test if corporate governance outcomes vary with ownership type. In contrast to the hypothesis that stand-alone firms with Anglo-American style of governance mechanism are more efficient in ensuring better corporate governance than firms with concentrated shareholding through crossholding by influential families, we find that corporate governance outcomes are similar in firms with dispersed shareholding and business group affiliate firms. Indian corporate sector provide us with an ideal setting to improve upon the first attempts to compare the relation between corporate holding structure and governance using cross-country data. We find that CEOs with controlling ownership gets a higher pay than outside CEOs irrespective of the holding structure and CEOs who are members of the controlling family in business group firms are incentivised by a higher performance sensitivity of pay. The CEO turnover analysis provides a contrasting picture as we find CEOs from promoter family are less likely to be fired for bad performance. There is indication that the power of the incumbent in business group affiliated firms influence the way in which incentives are designed but reputational considerations and ownership helps to align the interests. Our results are aligned to the hypotheses of Khanna and Yafeh (2007), who suggests that business group affiliate firms are not patently value-reducing as is commonly perceived in the corporate governance literature.

Finally we find that the moderately different governance mechanisms in the business group firms does not reduce the performance and can even have a positive effect of a firm's perceived long term prospects. Our results extends the Demsetz and Lehn (1985) argument that corporate ownership varies in ways that are consistent with value-maximization, in providing evidence that the corporate governance outcomes are very similar in firms with different ownership structures even though the governance *mechanism* may be quite different. In that sense, these results suggest a mechanistic intermediate for the endogeneity in corporate holding structure and firm performance.

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Table 1: Descriptive Statistics of Key Variables

Panel A: Full Sample					
Variable	N	Mean	Std. Dev.	Min	Max
ROA	5303	0.083147	0.111003	-0.84722	1.826514
Sales	5311	657.1477	2756.181	0	68215.14
MTBV	5094	141.9981	291.6497	0.187351	13524.21
Board Size	5311	9.948786	3.327964	1	33
% Outside Directors	5311	50.79997	16.18122	0	100
Salary	4448	212196.2	377119.5	0.14	1.48E+07
Bonus	1991	438199.3	983469.3	-844.88	1.75E+07
Total Pay	5251	403855	898856.7	0	1.78E+07
Variable Pay	4448	257026.4	806806.2	0	1.75E+07
CEO Turnover	5311	0.14517	0.352306	0	1
% Institutional Shareholding	5311	17.80631	14.49618	0	88.19
Promoter CEO	5311	0.374882	0.484138	0	1

Panel B: Indian Business Groups					
Variable	N	Mean	Std. Dev.	Min	Max
ROA	1891	0.083999	0.109348	-0.81051	1.826514
Sales	1893	657.0146	2007.595	0	68215.14
MTBV	1818	149.863	362.8397	3.308825	13524.21
Board Size	1893	10.10618	3.201947	1	31
% Outside Directors	1893	51.88533	13.47592	0	100
Salary	1637	271412.3	410443.2	2225.98	6285991
Bonus	911	537033.9	1198422	578.14	1.75E+07
Total Pay	1874	584152.9	1171081	0	1.78E+07
Variable Pay	1637	378757.9	1047291	0	1.75E+07
CEO Turnover	1893	0.123613	0.329227	0	1
% Institutional Shareholding	1893	19.5519	14.31978	0	87.67
Promoter CEO	1893	0.436873	0.49613	0	1

Panel C: Private Stand-Alone					
Variable	N	Mean	Std. Dev.	Min	Max
ROA	2794	0.08515	0.113931	-0.84722	0.659979
Sales	2800	381.1288	2254.533	0	67522.21
MTBV	2688	147.8645	251.9192	0.187351	4972.933
Board Size	2800	9.268571	3.005059	2	33
% Outside Directors	2800	51.50873	15.63403	0	100
Salary	2363	200654.3	377337	0.14	1.48E+07
Bonus	932	400703.2	791173.2	-844.88	1.06E+07
Total Pay	2776	354613.9	741357.8	0	1.73E+07
Variable Pay	2363	214602.2	665040.6	0	1.70E+07
CEO Turnover	2800	0.110714	0.313834	0	1
% Institutional Shareholding	2800	16.45825	14.27117	0	71.32
Promoter CEO	2800	0.4	0.489986	0	1

Panel D: Indian Public Sector					
Variable	N	Mean	Std. Dev.	Min	Max
ROA	618	0.071484	0.101692	-0.35949	0.736702
Sales	618	1908.126	5295.857	0	46071.67
MTBV	588	90.86356	192.3899	1.907576	2924.034
Board Size	618	12.54854	3.737116	3	27
% Outside Directors	618	44.26421	23.21643	0	94.11765
Salary	448	56697.87	90303.62	234.23	911999.8
Bonus	148	65956.63	171328.7	448.43	1081364
Total Pay	601	69104.4	146305.9	0	1391115
Variable Pay	448	35986.28	108450.5	0	1105855
CEO Turnover	618	0.367314	0.482464	0	1
% Institutional Shareholding	618	18.56709	15.41419	0	88.19
Promoter CEO	618	0.071197	0.257363	0	1

Table 2: Performance Sensitivity of CEO Pay

The dependent variable in each regression is the natural logarithm of annual CEO Pay. Column (1) presents the result for the full sample of BSE 500 firms for the period 2006-2013; (2) and (3) presents the result for business group affiliate firms with concentrated shareholding and private stand-alone firms with dispersed shareholding. All specifications are estimated with year and industry dummies. Standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1

	(1)	(2)	(3)	(4)	(5)
Dependent Variable	Log Total Pay				
ROA	0.578*** (0.025)	0.653*** (0.021)	0.986** (0.022)	0.891** (0.265)	0.897*** (0.254)
MTBV	0.006 (0.011)	0.0001 (0.0001)	0.0008 (0.001)	0.0001 (0.001)	0.0001 (0.001)
Business Group Affiliates	0.703*** (0.042)	0.662*** (0.041)	0.466*** (0.041)	0.516*** (0.055)	0.516*** (0.055)
Promoter CEO		0.392*** (0.040)	0.330*** (0.041)	0.332*** (0.040)	0.332*** (0.040)
% Shareholding- Promoters		-0.007*** (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
Log Sales			0.161*** (0.013)	0.161*** (0.013)	0.161*** (0.013)
Board Size			0.0173** (0.0065)	0.0175** (0.0068)	0.0172** (0.0065)
% Independent Directors			-0.0003 (0.0014)	-0.0002 (0.0014)	-0.0002 (0.0014)
% Shareholding- Institutions			0.018** (0.009)	0.018** (0.007)	0.018** (0.007)
Business Groups*				0.550 (0.400)	
ROA *					0.032 (0.411)
Promoter-CEO					Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes	Yes	Yes
Observations	4,143	4,143	4,143	4,143	4,143
Adjusted R^2	14.84	17.56	0.2212	0.2216	0.2210

Table 3: Comparison of Performance Sensitivity of CEO Pay

The dependent variable in each regression is the natural logarithm of annual CEO Pay. Columns (1)-(4) present the result for business group affiliates: all business group firms, business group firms with promoter CEOs and business group firms without outside CEOs. Column (4) presents the results for private stand-alone firms. All specifications are estimated with year and industry dummies. Standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1.

Dependent Variable	(1)	(2)	(3)	(4)
	All Business Group Affiliates	Log Total Pay Business Group Firms with Promoter-CEOs	Business Group Firms without Outside CEOs	Log Total Pay Private Stand-Alone
ROA	0.991** (0.445)	2.063** (0.694)	1.115** (0.418)	1.564*** (0.316)
MTBV	-0.0004 (0.0002)	-0.0005 (0.0004)	-0.0002 (0.0003)	0.00011 (0.0001)
Promoter CEO	0.231** (0.098)			0.491 (0.955)
Promoter CEO*ROA	1.6413*** (0.3080)			0.8886** (0.3744)
% Shareholding-Promoters	-0.0043 (0.0034)	-0.00069 (0.00390)	0.0073** (0.0031)	0.0041** (0.002)
Log Sales	0.141*** (0.034)	0.2834*** (0.0326)	0.219*** (0.299)	0.178*** (0.0275)
Board Size	0.031** (0.0126)	0.0271* (0.0136)	0.0021 (0.0136)	0.0138 (0.0105)
% Independent Directors	-0.0005 (0.0023)	0.0099** (0.0039)	-0.0056* (0.0032)	0.00161 (0.0017)
% Shareholding-Institutions	0.017*** (0.004)	0.0218*** (0.0044)	0.0294** (0.0036)	0.013*** (0.003)
Year Dummies	Yes	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes	Yes
Constant	10.232*** (0.2067)	9.5202*** (1.262)	10.095*** (0.3773)	9.2028*** (0.2708)
Observations	1,893	1052	841	2,257
Adjusted R ²	23.31	24.25	29.49	29.18

Table 4: Non-Linearity in Pay-Performance Sensitivity of CEO Pay

The dependent variable in each regression is the natural logarithm of annual CEO Pay. Column (1) presents the result for the full sample of BSE 500 firms for the period 2006-2013; (2) and (3) presents the result for business group affiliate firms with concentrated shareholding and private stand-alone firms with dispersed shareholding. All specifications are estimated with year and industry dummies. Standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1)	(2)	(3)
Dependent Variable	Full Sample Log Total Pay	Business Group Affiliates Log Total Pay	Private Stand-Alone Log Total Pay
Log Sales	0.187*** (0.0201)	0.245*** (0.0339)	0.270*** (0.0274)
ROA			
Lower Quartile-Median	0.328*** (0.0462)	0.399*** (0.0758)	0.321*** (0.0613)
Median-Upper Quartile	0.427*** (0.053)	0.548*** (0.087)	0.420*** (0.069)
Upper Quartile	0.531*** (0.187)	0.599*** (0.105)	0.510*** (0.116)
MTBV	0.000119 (0.00091)	1.98E-05 (0.00023)	0.00015 (0.0001)
Business Group Affiliates	0.464* (0.301)		
Board Size	0.0149** (0.0073)	0.00268 (0.0125)	0.0133 (0.0104)
Promoter CEO	0.0719 (0.0773)	0.0228 (0.136)	0.0283 (0.0938)
% Independent Directors	0.000894 (0.0013)	-0.000804 (0.00232)	0.0013 (0.0017)
% Shareholding-Promoters	-0.00346** (0.00166)	-0.00538 (0.00334)	0.00341* (0.002)
% Shareholding-Institutions	0.0134*** (0.00238)	0.0151*** (0.00395)	0.0127*** (0.0032)
ROA *	0.823** (0.337)		
Business Groups			
Year Dummies	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes
Constant	10.076*** (0.2098)	9.6024*** (0.3173)	10.0495*** (0.2888)
Observations	4,143	1,563	2,257
Adjusted R^2	25.85	22.38	29.13

Table 5: CEO pay and Industry-adjusted Performance

The dependent variable in each regression is the natural logarithm of annual CEO Pay. Column (1) presents the result for the full sample of BSE 500 firms for the period 2006-2013; (2) and (3) presents the result for business group affiliate firms with concentrated shareholding and private stand-alone firms with dispersed shareholding. All specifications are estimated with year dummies. Standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) Full Sample	(2) Business Group Affiliates	(3) Private Stand-Alone
Dependent Variable	Log Total Pay	Log Total Pay	Log Total Pay
Log Sales	0.200*** (0.0201)	0.264*** (0.034)	0.279*** -0.0275
Adjusted-ROA	1.021*** (0.274)	0.814* -0.442	1.523*** -0.317
MTBV	0.0001 (0.0002)	1.41E-05 (0.0002)	0.00011 (0.0001)
Board Size	0.0151** (0.0074)	0.0031 (0.0127)	0.0137 (0.0105)
Promoter CEO	0.0755 (0.0783)	0.00462 (0.138)	0.0464 (0.095)
% Independent Directors	0.00122 (0.0013)	-0.0005 (0.0023)	0.00166 (0.0017)
% Shareholding-Promoters	-0.0027 (0.0017)	-0.0043 (0.0034)	0.00411** (0.002)
% Shareholding-Institutions	0.0153*** (0.0024)	0.0182*** (0.004)	0.0136*** (0.0033)
ROA*	0.731** (0.36)		
Business Groups			
Year Dummies	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes
Constant	12.27*** (0.338)	10.50*** (0.575)	9.650*** (0.439)
Observations	4,143	1,563	2,257
Adjusted R^2	19.16	21.35	28.34

Table 6: Performance Sensitivity of CEO Turnover

The dependent variable in each regression is a binary indicator of CEO Turnover. Column (1) presents the result for the full sample. Columns (2)-(4) present the results for the business group affiliate firms: all business group affiliates, business group affiliates with promoter-CEOs, and business group affiliates with outside CEOs respectively. Column (5) presents the results for private stand-alone firms with dispersed shareholding. All estimations include year and industry dummies. Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) Full Sample	(2) All Business Group Firms	(3) Business Group Firms with Promoter-CEO	(4) Business Group Firms with Outside-CEO	(5) Private Stand-Alone
Dependent Variable	CEO Turnover	CEO Turnover	CEO Turnover	CEO Turnover	CEO Turnover
ROA	-0.334*** (0.036)	-0.494*** (0.0702)	-0.0528 (0.0429)	-0.6405** (0.0319)	-0.252*** (0.0556)
Log Sales	0.0165 (0.036)	0.0532 (0.0642)	0.0621 (0.0433)	-0.0066 (0.0043)	-0.0586 (0.0616)
Log Pay	0.359 (0.649)	-2.63 (2.63)	-2.98 (2.47)	-1.87 (1.66)	1.409 (0.947)
MTBV	4.25E-05 (0.00026)	0.000792 (0.00065)	1.86E-06 (0.00062)	-0.000325 (0.000359)	-0.00051 (0.00052)
Business Group Affiliates	-0.034** (0.014)				
Board Size	0.0951*** (0.0155)	0.106*** (0.0283)	0.403** (0.107)	0.054** (0.022)	0.103*** (0.0259)
Promoter-CEO	-0.735*** (0.223)	-0.710* (0.382)			-0.647** (0.31)
% Outside Directors	-0.0168*** (0.00371)	-0.0109 (0.00729)	-0.0116 (0.0286)	-0.0072 (0.0053)	-0.0249*** (0.00544)
% Shareholding-Promoters	0.00343 (0.00324)	0.00157 (0.007)	0.0022 (0.0020)	-0.0009 (0.0005)	0.00314 (0.00481)
% Shareholding-Institution	0.0127*** (0.00484)	0.0172** (0.00085)	0.0177** (0.00084)	-0.0015 (0.00053)	0.0177** (0.00784)
ROA*	0.699 (0.735)				
Business Groups					
Promoter-CEO*		-0.1607** (0.0819)			0.0739 (0.0728)
ROA		Yes	Yes	Yes	Yes
Year Dummies		Yes	Yes	Yes	Yes
Industry Dummies		0.1756** (0.0558)	0.0593 (0.0906)	0.0332 (0.0623)	0.2196*** (0.0459)
Constant	0.2072*** (0.0357)	0.197 (0.0357)	0.085 (0.0357)	0.091 (0.0357)	0.134 (0.0357)
Pseudo R ²	0.139	0.197	0.085	0.091	0.134
Observations	4,143	1,535	1052	841	2,250

Table 7: Non-Linearity in Performance Sensitivity of CEO Turnover

The dependent variable in each regression is a binary indicator for CEO Turnover. Column (1) presents the result for the full sample of BSE 500 firms for the period 2006-2013; (2) and (3) presents the result for business group affiliate firms with concentrated shareholding and private stand-alone firms with dispersed shareholding. All specifications are estimated with year and industry dummies. Standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) Full Sample	(2) Business Group Affiliates CEO Turnover	(3) Private Stand-Alone CEO Turnover
Dependent Variable	CEO Turnover		
Log Pay	-0.332*** (0.0364)	-0.485*** (0.0706)	-0.242*** (0.0562)
Log Sales	0.019 (0.0362)	0.0614 (0.0645)	-0.0613 (0.0618)
ROA			
Lower Quartile-Median	-0.305* (0.163)	-0.149 (0.273)	-0.491** (0.249)
Median-Upper Quartile	-0.315* (0.168)	-0.316 (0.285)	-0.333 (0.248)
Upper Quartile	-0.0024 (0.18)	-0.168 (0.337)	0.227 (0.264)
MTBV	4.43E-05 (0.0003)	0.00092 (0.0006)	-0.0007 (0.0006)
Business Group Affiliates	0.041** (0.017)		
Board Size	0.0960*** (0.0155)	0.105*** (0.0284)	0.107*** (0.026)
Promoter-CEO	-0.721*** (0.221)	-0.763** (0.384)	-0.660** (0.306)
% Outside Directors	-0.0166*** (0.0037)	-0.0112 (0.0073)	-0.0244*** (0.0055)
% Shareholding- Promoters	0.00368 (0.0032)	0.00138 (0.007)	0.00325 (0.0048)
% Shareholding- Institutions	0.0140*** (0.0049)	0.0176** (0.0086)	0.0189** (0.008)
ROA*	0.765 (0.665)		
Business Groups			
Year Dummies	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes
Constant	0.2089*** (0.0358)	0.1856** (0.0560)	0.2191*** (0.0459)
Pseudo R^2	0.137	0.145	0.134
Observations	4,143	1,535	2,250

Table 8: CEO Turnover and Industry-Adjusted Performance

The dependent variable in each regression is a binary indicator for CEO Turnover. Column (1) presents the result for the full sample of BSE 500 firms for the period 2006-2013; (2) and (3) presents the result for business group affiliate firms with concentrated shareholding and private stand-alone firms with dispersed shareholding. All specifications are estimated with year dummies. Standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) Full Sample	(2) Business Group Affiliates	(3) Private Stand-Alone
Dependent Variable	CEO Turnover	CEO Turnover	CEO Turnover
Adjusted ROA	-0.334*** (0.036)	-0.495*** (0.0702)	-0.252*** (0.0556)
Log Sales	0.0167 (0.036)	0.0537 (0.0642)	-0.0575 (0.0615)
Log Pay	0.29 (0.649)	-3.099 (7.653)	1.298 (0.949)
MTBV	5.12E-05 (0.00026)	0.000798 (0.00065)	-0.00048 (0.00052)
Business Group Affiliates	0.039** (0.021)		
Board Size	0.0951*** (0.0155)	0.106*** (0.0284)	0.102*** (0.0259)
Promoter-CEO	-0.739*** (0.223)	-0.719* (0.383)	-0.653** (0.31)
% Outside Directors	-0.0168*** (0.0037)	-0.0108 (0.0073)	-0.0249*** (0.00545)
% Shareholding-Promoter	0.00346 (0.00324)	0.00126 (0.00697)	0.00317 (0.0048)
% Shareholding-Institution	0.0128*** (0.00484)	0.0170** (0.00848)	0.0179** (0.00784)
ROA *	0.733	3.332	
Business Groups	(0.734)	(7.647)	
Year Dummies	Yes	Yes	Yes
Industry Dummies	Yes	Yes	Yes
Constant	0.2042*** (0.0361)	0.1297** (0.0651)	0.2367*** (0.0494)
Pseudo R^2	0.133	0.144	0.124
Observations	4,143	1,535	2,250

Table 9: Ownership Structure and Firm Performance

The dependent variable for each specification is given below. The results presented in this table suggest that the ownership structure do not have a statistically significant impact on firm performance. All specifications are estimated with year and industry dummies. Standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) ROA	(2) MTBV	(3) EPS
Business Group	-0.00500	12.85	-0.162
Affiliates	(0.00330)	(9.401)	(0.250)
Log Sales	0.00811***	-9.580***	0.160**
	(0.00103)	(2.956)	(0.0782)
% Shareholding-Promoters	0.000445***	2.284***	-0.0177***
	(7.86e-05)	(0.264)	(0.00594)
% Shareholding-Institutions	0.000742***	1.695***	-0.0184**
	(0.000122)	(0.374)	(0.00920)
Board Size	0.000112	-2.408*	0.0332
	(0.000512)	(1.455)	(0.0387)
Promoter CEO	-0.0186***	-20.05**	-0.310
	(0.00320)	(9.062)	(0.242)
Promoter CEO*	0.0098	32.72*	0.5008
Business Group	(0.0067)	(18.52)	(0.4890)
% Independent Directors	0.000203*	0.0762	0.0168**
	(0.000109)	(0.318)	(0.00821)
Constant	0.0197**	96.2447**	0.2288
	(0.0087)	(29.049)	(0.700)
Observations	4,838	4,661	4,838
Adjusted R^2	0.109	0.148	0.107