Determination of Board and CEO Compensation in Emerging Economy: Evidence from India

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First Draft.

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Abstract:

This paper attempts to detect the determinants of board and CEO compensation as well as the different components of the board compensation in the context of an emerging economy, India, where managerial market is yet to be developed. I use panel data of the Indian manufacturing sector to explore two broad issues on determination of board and CEO compensation. First what is the effect of corporate governance and firm performance on board compensation? I have found, board structure, firm performance and diversification have significant effect on total as well as different component of compensation. Second, how different personal attributes of the CEO along with other determinants influence the personal compensation of the CEO? I have found in-firm experiences of the CEO and the relation with founder of the firm or group are the most important determinant of their compensation, which is very different from the findings in US and other developed countries. Further, this study reveals the important factors that determine the probability of the compensation of the CEO to cross the threshold level of compensation in India? All other findings are similar to the previous findings.

1. Introduction

Determination of the level of compensation of the board and Chief Executive Officer (CEO) has been topic of great interest in academics and business community. Large amount of theoretical literature have been developed to determine the optimal executive compensation contracts that link pay with variation of firm performance. Such contracts aim to align the interest of managers (agents) with the interest of shareholders (principals). Theoretical propositions have been spawned by several empirical studies to test the veracity, strength and form of the relationship between executive compensation and firm performance. In this paper I have examined the effect of different measures of firm performance, diversification and corporate board structure on the compensation of board of directors in an emerging economy India. Further, I have also examined the determinants of different components of board compensation measured both at level terms as well as proportion of total compensation. Finally I have analysed the effect of different personal attributes of the CEO along with other economics variables of the firm and also estimated the probability that the CEO compensation exceeds a threshold level.

Several well-established stylised facts emerge in the literature of determination of executive compensation. (1) Not only current firm performance but also past firm performance has positive effect on the compensation of the CEO[1]. (2) When the CEO is Chairman of the board and/or size of the board is large then compensation of the CEO is significantly higher[2]. (3) The relation between the executive compensation and composition of the board is ambiguous[3]. (4) The relation between ownership pattern of

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[1] For argument under (1), see Core et al. (1999); Rose and Shepard (1997) etc.

[2] For argument under (2), see Main et al., 1995; Core et al., 1999; Goyal and Park, 2002; Crystal, 1991. For instance, Crystal, 1991 argue If the CEO becomes the chairman of the board then monitoring becomes more difficult, because CEO essentially has the power to hire or remove other non-executive directors (NED). Such board members take the role of passive advisors especially when it concerns the compensation of CEO. Main et al. (1995) find if the CEO is appointed before the other directors are appointed, then the levels of compensation will be higher compared to if he/she is appointed after the Board of directors. They argue that when CEO also holds the Chairman post he/she gets higher remuneration due to their higher responsibility.

[3] For argument under (3), see Finkelstein and Hambrick (1989); (Jensen, 1993); Core et al. (1999)

the firm and level of CEO compensation is also mixed[4]. (5) Compensation of the executives increases with the increase in firm diversification[5].

Substantial awareness about the importance of internal monitoring has been noticed not only in developed countries but also in the developing countries in the past few years. In US from the period of 1971 to 1994 external representative in the corporate board, level of incentive to the external directors and external pressure on directors by institutional shareholders increased, whereas average size of the board decreased over the year (Huson et al. 2001). Similar to Cadbury committee report 1992 in UK, in the developing economies like India, compensation of CEO and other directors has become a matter of great concern of different committees like Kumar Mangalam Birla committee report 1999, CII report 1998 etc. These committee reports time and again argue that all compensation paid to the directors including independent directors should be fixed by the board of directors and approved by the shareholders in general meetings. There should be some limit on the each component of the compensation including stock options.

Most of the empirical studies on CEO compensation and corporate governance till date have been with respect to developed countries like US, UK, Canada, Japan, Italy etc. Several economists have already argued with sufficient force that there are some basic Institutional structural differences in firm structure, market and organisation between developed and developing countries. This paper tries to make a comprehensive analysis on different determinants of CEO compensation that are important in emerging economics and newly liberalized economy like India.

The first question that I try to analyse is, whether the level of board compensation as well as different component of it is determined on adhoc basis or the performance of the firm has any active role. Accounting measures in developing countries are criticised on the ground of highly manipulating accounting standards. Therefore, I have used both accounting based (return on assets (ROA)) as well as market based (Tobin's Q), current as well as past, measures of performance in my analysis.

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[4] For argument under (4) see Holderness and Sheehan (1998); Allen (1989); Lambert (1993) and Core et al. (1999); Ryan and Wiggins (2001).

[5] For argument under (5) see Aggarwal and Samwick (2003); Jensen and Murphy (1990); Jensen (1986); Shleifer and Vishny (1990); Rose and Shepard (1997); Reeb and Duru (2002).

The second question of this paper is, what is the effect of size and composition of the board on compensation of board and CEO. It is also argued that in the emerging economies that there is no clear distinction between ownership and control. In India very often CEO are selected from the relative of the founder and there is a common fear that they build up their wealth at the cost of shareholders. Therefore, in my analysis I also find out the effect of identification of the CEO i.e., if the CEO is relative of the founder, if the CEO is Chairman or there are more than one CEO in the firm, on the compensation of the board and CEO. In the latter part of my analysis, I further consider the effect of equity holding by the founder and the government on the level of compensation of the board.

A major part in the compensation package of CEO and other directors in the board, which got very less attention in the literature is based on informational rent. This informational rent increases with the increase in operational difficulties of the firm. The operational difficulties rise with the size and diversification of the firm. Therefore the third question in the paper is, how the compensation of the board as well as the CEO changes with the different type of diversification. Most of the studies on diversification and CEO compensation talk about one-way diversification i.e., Industry diversification. In this paper I consider different measures of product as well as locational diversification simultaneously and find out its effect on board and CEO compensation.

The fourth question that I answer in the paper is what are the effects of different personal attributes of the CEO in determining his/her own compensation, other than the firm specific characteristics discussed earlier. Regarding the compensation of the CEO, according to Security and Exchange Board of India (SEBI) guidelines, firm reports the compensation of the CEO and other Executive directors along with personnel details, if the compensation exceeds the threshold level[6]. Finally, I also analysed the determination of probability that the compensation of the CEO will be more than the threshold level through Tobit model. To the best of my knowledge this paper is one of the first attempt to find out the over-all picture of board and CEO compensation for large number (462) of

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[6] Threshold level is defined like this: for the year 1997 and 1998 it was Rs.3 Lakhs per annum, for 1999 and 2000 it was Rs.6 Lakhs per annum and for 2001 and 2002 it was Rs.12 Lakhs per annum. According to SEBI guidelines if the employees remuneration is less than the threshold level then firm may not report the personal details of that employee in the Annual Report.

firms from the year 1997 to 2002 in India based on a primary data collected from the annual reports by the author himself.

The remaining part of the paper is organised as follows: Section 2 discuss the Effect of Internal Monitoring, CEO Characteristics Firm Performance and Diversification on CEO and Board Compensation. Section 3 discusses the empirical model, methodology and variables used in this paper. Data and descriptive statistics of the variables as preliminary data analysis are discussed in section 4. In section 5 I present the empirical document on the association between level of board compensation and set of interest variables such as board structure, firm performance, firm diversification and ownership pattern. In section 6 I present the linear regression results of level of CEO on the aforesaid variables. I also try to find out the determinant of the probability of CEO compensation to be more than threshold level through Tobit model in the same section. Section 7 concludes the discussion.

2. Theoretical and Empirical Background of Determining CEO and Board Compensation

According to the incentive wage theory under incomplete information of capability of the CEO, compensation of the CEO mainly depends on five broad factors: Internal monitoring, Performance of the firm, Complexity of the firm, Personal attributes of the CEO and.

$\text{Compensation} = f \text{(performance, monitoring, complexity, personal, Z)}$ --------------(1)

Z is the other firm specific factors which affect the compensation of the board or CEO e.g. shareholding pattern, R&D expenditure, Advertisement expenditure, Share price Volatility, firm age etc.

Monitoring is the responsibility of the board of directors. The efficiency of the board depends on the size, composition of executives and non-executives directors (NED) and distance of the CEO from the Chairman of the board (say D_CH). In India there is one more factor, which also plays a crucial role, is the relation between the CEO and founder (say D_REL) of the firm i.e., whether CEO is relative of the founder of the firm. Therefore,

$\text{monitoring} = g \text{(board size, proportion of NED, D\_CH, D\_REL)}$ --------------(2)

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Complexity of the firm depends on the size of the firm (say SALES), level of diversification and type of diversification i.e., product diversification (COUNT), geographical diversification (LOCATION) and diversification index (DIVERSE). Therefore,

$$\text{complexity} = h \ (\text{SALES, COUNT, LOCATION, DIVERSE}) \text{ --------------(3)}$$

Another major important factor in determining the compensation of especially the CEO is the personal attributes of the CEO like age, experience and educational background. Therefore,

$$\text{personal} = k \ (\text{age, experience, education}) \text{ --------------(4)}$$

Substitute equation (2), (3) and (4) back to (1) therefore, we get

$$\text{Compensation} = F \ (\text{performance, board size, proportion of NED, D\_CH, D\_REL,}$$
$$\text{SALES, COUNT, LOCATION, DIVERSE, age, experience, education, Z}) \text{ -----(5)}$$

2.1. Internal Monitoring

The board of directors and blockholders mainly do internal monitoring. This helps to resolve the agency problem that arises due to separation of ownership and control of the firm. Outside directors are supposed to be more efficient monitors of management and key decision makers especially when it concerns the compensation of the CEO. They are quite concerned about their reputation (Fama and Jensen (1983)). On the other hand inside directors are less likely to be the efficient monitor, because their interest is tied up with the CEO and all board members (Weisbach (1988)). A set of empirical studies argues that proportion of outside directors has positive effect on the compensation of the CEO. For instance, Core et al. (1999) find that if the proportion of 'gray' directors, outside directors appointed by CEO, increases the compensation of the CEO. Finkelstein and Hambrick (1989) do not find any significant relation between proportion of outside directors and compensation. There is also argument in the literature that due to peer culture of the directors, board avoids any conflicts with CEO and as a result CEOs determine the business strategy on their own (Jensen, 1993). Small board operate more efficiently than the larger board and thus, monitor more effectively (Jensen (1993) and Yermack (1996)).

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In emerging economies like India corporate board in most of the firms are not independent. These boards are highly influenced by the founder(s). Therefore, the effect of size and composition of the board on the compensation of the CEO and board may not be similar to that of in the context of developed countries. In the emerging economies management and ownership are not very distinct. Very often there are multiple number of CEO in the board and some of them are related to the founder of the firm also. So, it can be expected that compensation of the CEO as well as board will be influenced if CEO is related to the founder or if there are multiple number of CEOs, but not size and composition of the board.

2.2. Shareholding Pattern

There exist mixed results regarding the ownership pattern and CEO compensation. High ownership of CEO and other managers aligns the interest of the shareholders with the CEO. Therefore, there is less need for the incentive compensation. The relation between CEO stock ownership and incentive compensation is negative (Allen 1989; Lambert 1993; Core et al. 1999; Ryan and Wiggnis 2001). For instance, Core et al. (1999) find that there is a significant negative relation CEO compensation and CEO ownership and existence of external block holders, who owns more than 5 percent share in the company.

Adverse selection model argue that managers keep a high ownership stake in the firm to signal to the public markets that they have projects of high quality (Leland and Pyle 1977). Therefore, there can be positive relationship between managerial ownership and managerial compensation. For instance, Holderness and Sheehan (1998) find that there is a positive relation between managerial compensation and managerial shareholding in publicly held corporation.

In India, most of the firms are family based or belong to business group. CEO is mostly related to the founder and other board members are also related to the founder's family. Therefore, one can expect that if the founder's share holding increases the compensation of the board as well as CEO will be more. Is the CEO is related to the founder and the firm is belong to the business group then also it is expected that the compensation of the board and CEO will be higher. Just opposite will hold if the holding

of government or institutional investors like banks, insurance companies, mutual funds or other financial institutions increase.

2.3 Identity and characteristics of the CEO

Age, experience and educational qualification are the key identifier of competent and talented CEO, therefore, important determinants of CEO compensation.

Age: Older CEOs have the incentive to choose the project, which will mature before their retirement i.e., they go for long-term project (Gibbons and Murphy (1991); Dechow and Sloan (1991)). However, for sake of reputation younger CEOs focus on short-term project (Hishleifer (1993)). Rayan and Wiggins (2001) find a concave relation between cash and bonus payment and age of the CEO.

Experience: Murphy (1986) suggests that the ability of a manager at the beginning of the career is not known. As he progresses he becomes more experienced and the compensation of the manager or CEO also increases. Palia (2001) find that the compensation of the CEO increases exponentially with the increase in number of years the CEO has been working as CEO. Since, most of the CEOs in India are related to the founder of the firm they start their career from the same firm or some other firm but from the same business group. Therefore, I took the number of years the CEO is working in the firm (INFIRMEXP) is the proxy for experience. There is one more advantage of taking in firm experience into consideration. This gives the idea about the rent for having internal information about the firm than compare to a new comer. In Indian context very limited studies has been done in the context of Mincerian earning function. Datta and Rao (1985) found that education and experience are important factor in determining the compensation of managers.

Education: Compensation of the CEO also depends on the level of education as well as quality of education. In this paper I consider total year of schooling as a proxy for level of education. In the annual reports I got the data on the age and total experience of the CEO. In India children start schooling at the age of 5. Therefore, total year of school can be calculated as (age - experience – 5). This method has been used by Saha and Sarkar (1999). Sarkar and Sen (1996) do not exist a one-to-one monotonic function between educational qualification and earning of the managers.

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Identity: In India CEOs are very often selected from the relative of the founder of the firm. Therefore, it is expected that these CEOs will get larger compensation than those who came from outside. Similarly when CEO becomes the chairman of the board he/she gets some added responsibility. Monitoring the CEO also becomes difficult and as a result the compensation of the CEO cum Chairman increases (Brickley et al. 1997). Though Ryan and Wiggins (2001) do not find any significant relation between dummy for CEO cum Chairman and compensation of the CEO.

2.4 Firm diversification

The issue of effects of firm diversification on managerial compensation has got relatively less attention in the literature. The literature finds the product diversification and geographical diversification of the firm has positive effect on the compensation of the CEO[7]. There are broadly two motivations for diversification for the CEO, managerial entrenchment and matching model.

Managerial entrenchment explanations argue that diversification frequently undertaken by self-serving managers for increasing their compensation packages, even though diversification reduces the value of the firm. If the CEO's compensation is positively related to firm size CEO(s) may have an incentive to diversify the firm, even when it does not contribute to share holders wealth. Diversification increases the complexity of the resource allocation and strategic thinking in business competition. CEO(s) may need to face different type of customers, different types of industry structure and its rules and regulations. CEO(s) have to increase his/her ability to realize the potential synergies involving facilitating coordination and communications across business groups in the industry. So, there is greater information asymmetry between shareholders and managers about the investment in new lines of business. So, managers get greater discretion to fix his compensation. So, according to this argument executive will have greater compensation as diversification increases. So, industrial diversification and executive compensation move in the same direction.

According to matching model argument, CEO creates a good match by diversifying the firm. CEO(s) sometime diversify the firm in such a way that it makes a

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[7]Rose and Shepard (1997); Reeb et al. (1998) and Reeb and Duru (2002)

unique match with their talents. Now by increasing the value of the firm with her uniquely suited human capital, the CEO(s) can prove his/her ability and can negotiate for higher wages. So, in this way they can extract rent from the firm through diversification. If CEO replacement is costless then matching models implies that each time diversification will lead to replacement the current CEO with more talented and optimally matched one. But the CEO turnover is costly to both firm and the CEO. So, there will be no change in CEO until and unless mismatch is too severe i.e. it decreases the value of the firm by large amount. So, there will be always a bargaining between board of directors of the firm and CEO. Compensation will be less for incumbent CEO than a perfect match CEO. For instance Rose and Shepard (1997) calculated a diversification index with unique 4-digit SIC code and find that this diversification index is positively correlated with ln(Salary & Bonus) as well as ln(total compensation). Reeb and Duru (2002) calculate factor score of geographical diversification by ratio of foreign assets to total assets, foreign sales to total sales and number of geographical segments and find that geographical diversification has positive effect on CEO compensation.

2.5 Firm size, risk and performance

Most of the earlier studies on determinant of managerial pay are focused on role of firm size on the compensation of the CEO. As the firm become larger in size the complexity in operation also increases. Rosen (1992) provides a theoretical justification for the positive relation between pay and firm size. There are several evidences in the literature, which prove the above proposition[8].

Relatively recent literature is focused on the effect of firm performance on the compensation of the CEO. It has now become empirically proven fact that CEO pay increases with the increase in the performance of the firm[9]. For instance Rose and Shepard 1997; Brick et al. 2002 used current as well as past performance of the firm influence the compensation of the CEO. So, it is expected I will also get positive effect of firm performance on the compensation of the board and CEO. In Indian context, Bhattacherjee et al. (1998) find that accounting based performance measure is not a significant determinant of the change in Compensation of the CEO. Rather market based

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[8] Roberts 1956; Murphy 1985; Zhou 2000; Ryan and Wiggins 2001.

measure such as present and past value of Tobin's Q have significant effect on the change in Compensation of the CEO. They also find that pay performance sensitivity rises after the liberalisation for the large firms. Therefore, I have taken both accounting as well as market based firm performance measure in the current and past year.

To capture the effect of firm specific risk on the compensation of the board and CEO I have taken standard deviation of stock return of last 30 days of the financial year of the firm (RISK). There are lots of window dressing go on during the last month of the financial year and it has significant effect on setting the compensation of the CEO. It is expected that as the RISK of the firm increase the compensation of the board as well as CEO will fall[10].

2.6 Research and Development expenditure and Advertisement Expenditure

Managers have larger interest in short term interest rather than long term interest of the firm. Therefore, opportunistic managers reduce the expenditure on R&D due to two reasons[11]: (1) Horizontal Problem: When CEO is close to retirement he is least interested in investing in long term investment. (2) Cover-up Problem: When the firm faces loss mangers quickly cut down the R&D expenditure to cover the loss. Therefore, to reduce the opportunistic reduction in R&D expenditure, shareholders are expected to reward the CEO for R&D spending, because it also gives some tax exemption.

Similarly I also included intensity of advertisement expenditure as another intangible asset, which is responsible for future growth prospect of the firm. In the literature intensity of advertisement expenditure has positive effect on the compensation of the CEO as well as board (e.g. Palia 2001; Brick et al. 2002).

3. Empirical Model and methodology:

In section 5 (below) I have used fixed effect panel model. This will take care the industry specific and time specific shock. I have discussed about this in my previous paper. In section 6 I have used Tobit model with time and industry fixed effect, to find out the probability of CEO compensation to be more than the threshold level.

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[9] Lewellen and Huntsman 1970; Masson 1971; Jensen and Murphy 1990.
[10] Brick et al. 2002 find cash flow risk has negative significant association with cash compensation of the CEO;

The null hypothesis of this paper is whether board characteristics, firm characteristics and firm diversification have any effect on total as well as different component of compensation of board and CEO. In section 5, I use the following generic model to estimate the level of compensation of the board:

$$\text{COMPENSATION}_{it} = \alpha + \alpha_t + \beta_1 \text{SIZE}_{it} + \beta_2 \text{PROP\_NED}_{it} + \beta'_3 \text{DIVERSE}_{it} + \beta_4 \text{RISK}_{it}$$
$$+ \beta_5 \text{D\_CH}_{it} + \beta_6 \text{D\_REL}_{it} + \beta_7 \text{D\_MORE\_CEO}_{it} + \beta_8 \text{ROA}_{it} + \beta_9 \text{ADJQ}_{it} + \beta_{10} \text{ROA}_{it-1} +$$
$$\beta_{11} \text{ADJQ}_{it-1} + \beta_{12} \text{SALES}_{it} + \beta_{13}(\text{SALES})^2_{it} + \beta_{14} \text{ADVINT}_{it} + \beta_{15} \text{R\&DINT}_{it} +$$
$$\beta_{16} \text{FIRM\_AGE}_{it} + \beta_{17} \text{D\_GROUP}_{it} + \sum_{g=2}^{19} (\beta_{18g}(\text{INDUSTRY\_DUMMY}_{it})) + \varepsilon_{it} \qquad (6)$$

where i denotes the firm and t denotes the year. α is the intercept. All these equations are estimated through fixed effect in time and Industry unbalanced panel method. α_t is the time varying intercept.

Let the compensation of the CEO, Y^* is a latent variable,

$$Y^* = \beta'X + U \text{ where } U_i \sim N(0,\sigma^2) \text{ and } E(\beta'X) = \mu.$$

Therefore, $Y^* \sim N(\mu,\sigma^2)$. From the sample of size n $(y_1^*, y_2^*, \ldots y_n^*)$, let for the m number of observation it is found that $y^*>c$, where c is some critical constant value. For the rest of the observations (n-m) in the sample all y^* will be less than c. Therefore, we can fit a censored model as:

$$y_i = y_i^* = \beta'X_i + u_i \quad \text{if } y_i^* > c$$
$$y_i = c \qquad\qquad\qquad \text{otherwise.}$$

Therefore, the likelihood function would be:

$$L(\mu,\sigma^2 \mid y) = \prod_{y_i^*>c} \frac{1}{\sigma} \phi\left(\frac{y_i-\mu}{\sigma}\right) \prod_{y_i^*\leq c} \Phi\left(\frac{c-\mu}{\sigma}\right)$$

$$L(\mu,\sigma^2 \mid y) = \frac{1}{\sigma^m} \prod_{y_i^*>c} \phi\left(\frac{y_i-\mu}{\sigma}\right) \left(\Phi\left(\frac{c-\mu}{\sigma}\right)\right)^{n-m} \qquad (7)$$

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[11] Cheng 2002; Brick et al. 2002 find R&D expenditure has positive effect on CEO and board compensation.

But in this paper the problem is little different. According to Company Act, 1956, in India companies have to report the remuneration of all the employees in the annual reports, whose remuneration are above the threshold level, along with other personnel details under section 217(2A). Thus, there are three types of companies in Indian corporate sector, type A, B and C. Type A are those firms who report the Remuneration of the all the employee in the annual reports, whose remuneration are above the threshold level, along with other personnel details. Type B firms are those who have no employee who have remuneration more than the threshold level. Type C firms do not supply the section of personnel details, in the annual reports. Instead they write if any shareholder is interested about this information then latter should write to the Company Secretary. For this type of firm, no information is available about the gross remuneration of the CEO and other personnel details and treated as missing data.

Let call the threshold level, which is also level of censoring as c. y_i^* is observable only if $y_i^* > c$. Therefore, under this scenario, the Tobit Model is defined as:

$$y_i = y_i^* \text{ if } y_i^* > c$$
$$= 0 \text{ otherwise.}$$

Therefore, the likelihood function will be:

$$L(\mu, \sigma^2 \mid y) = \prod_{y_i^* > c} \frac{1}{\sigma} \phi\left(\frac{y_i - \mu}{\sigma}\right) \prod_{y_i^* \leq c} \Phi\left(\frac{0 - \mu}{\sigma}\right)$$

$$= \frac{1}{\sigma^m} \prod_{y_i^* > c} \phi\left(\frac{y_i - \mu}{\sigma}\right) \left(1 - \Phi\left(\frac{\mu}{\sigma}\right)\right)^{n-m} \tag{8}$$

Therefore, in section 5, the level of compensation of the CEO is estimated by using the equation (6) with two more variables, INFIRM_EXP and it's square. Here y_{it}^* is the COMPENSATION$_{it}$ of the CEO and COMPENSATION$_{it}$ is defined as in equation (6).

Dependent Variables:

Measurement of level of COMPENSATION: All the variables used in equation 1 and 2 are at constant price of 1993-94. COMPENSATION is a generic term, which can be level

of total compensation of the board or different components of total compensation of the board such as Salary, Commission, Perquisites and other benefits (Perks) and Sitting fees. In India 1 percent of the net profit is given as commission to the board. Sitting fees are paid only to the Non-Executive Directors. Salary and Perks are payable only to Executive Directors. Commission is payable to all the member of the Board. COMPENSATION can also be the measure of level of gross remuneration of the individual CEO, which is collected from the annual reports in the section of personnel details of the employee, under the section 217(2A) of the Indian Companies Act (1956) if available.

Independent Variables:

Firm Performance: Two measure of firm performance[12] along with their past observation are used in the analysis to check the effect of different accounting measure on COMPENSATION. The first one is Return on Assets (ROA), an accounting based measure and the second one is Adjusted Tobin's Q (ADJQ), a market based measure of performance. ROA is defined as the ratio of gross profit (i.e., profit before depreciation, interest and taxes) to book value of total assets. Tobin's Q is defined as the ratio of market value of equity and market value debt to replacement costs of firm's assets. In India, as some other developing countries, there is no active market for debt. Thus instead of market value of debt, book value of debt had to be used in the computation in the computation of Tobin's Q (Adjusted)[13].

Characteristics of the Board and shareholding pattern: The board character has been taken into account through five variables as proxy for corporate governance in India. First one is size of the board (SIZE) i.e., total number of directors in the board. The second is the proportion of non-executive directors in the board (PROP_NED) i.e., ratio of number of non-executive directors to total number of directors in the board. Third measures is whether CEO of the firm is also the Chairman of the board, D_CH dummy variable take the value 1 if yes. Fourth measure is dummy variable D_REL takes the value unit if CEO is relative of the founder of the firm or group. Fifth measure is also a dummy variable D_MORE_CEO if number of CEO in the firm is more than one. I have shareholding data

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[12] Core et al. (1999); Rose and Shepard (1997)

[13] Sarkar and Sarkar (2000); Khanna and Palepu (1999) used to measure the performance of Indian firm.

by different groups for only two years 2001 and 2002. In Table 4 I included percentage of shareholding by the founder (PROMS) and government (GOVTS) and one interaction variable (PROMS * D_REL) with other variables in equation (6).

Measurement of Diversification: In this paper I consider mainly three types of diversification measure (DIVERSE). The descriptive statistic of diversification is shown in Table 1 under the nine cases consider above. The first measure is, COUNT i.e., number of unique three digit product that a firm produces each year. This is the simplest measure of diversification. The second measure is D_INDEX. This is a complicated index. For this, I am following Rose and Shepard (1997) measure of diversification index, where we define the D_INDEX as follows:

$$D\_INDEX_{it} = 1 - \sum_{j=1}^{count} \left[\frac{product\_sales_{ijt}}{Total\_sales_{it}} \right]^2$$

We take the square of the ratio sales of each product j to total sales of the company i at time t and sum over all the products j. Then I subtract from unity and get D_INDEX_{jt} for jth firm at time period t. D_INDEX is an increasing function of number of products i.e., COUNT as well as equality in the sales of different product. The third measure of diversification is LOCATION i.e., the total number of places/sites, where the firm has plants. These indicate how much the firm is geographically diversified with in the domestic territory.

Other economic determinants of level of compensation: Other than the above variables of interest compensation of the board as well as CEO are also dependent on many other variables[14]. Large firms have greater complexity and growth opportunity. These firms demand for more competitive CEO and other directors so, it is expected that compensation of the directors in large firm will be higher than relatively smaller one. Thus I take SALES and its square as one of the economic determinant. Firm risk regarding the share price in the stock market during the last month of the financial year is also potential economic determinant of the level of compensation so, I included standard deviation of the stock return of the last month of the financial year (RISK) as another control variable. To take care of firm specific heterogeneity ADVINT (ratio of

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[14] Some of these variables are included in different studies e.g. Rosen (1992); Smith and Watts (1992); Core et al. (1999) etc.

advertisement expenditure to sales), R&DINT (ratio of Research and Development expenditure to sales) and age of the firm (FIRM_AGE) are included. To see the differential effect of the firms belongs to business group I also included group dummy (D_GROUP), which take the value 1 if the firm is from business group. Finally, I included nineteen industry specific dummy variables as controls for industry specific differences in demand for managerial talents.

4. Data:

Data on the compensation of the board as well as CEO and other executives of Indian firm are not available in any database. So I collected directly from the primary source i.e., the annual reports of the firms. For this purpose I gained access to the annual reports of 462 firms from the 1996-97 to 2001-02 from different sources. There are some missing data for few years due to unavailability of corresponding annual reports. The data on the compensation of the board along with its different component are reported in one of the schedule in expenditure section. Data on gross remuneration of CEO and other personnel details are available in Annexure B of Directors' Report under section 2172(A) Company Act 1956.

Data on Corporate Governance variables are also not available on time series basis in any database in India. Thus, I also collected all the information on board of directors from the list of the name of the directors along with designation in the annual reports. The detail information about the CEO and other directors are available in the section of Corporate Governance or Directors' Report in the annual reports. All other data on the performance of the firm, diversification and other economic indicators are collected from the database called Prowess produced by Centre for Monitoring Indian Economy (CMIE).

4.1 Preliminary Data analysis:

Prior to regression analysis, lets analyse the data on the basis of descriptive statistics of the variables and Pearson correlation coefficient matrix. The rows of Table 1 shows the mean statistics of Total compensation of the board (TOTAL_COMP), total salary, total commission, total perquisites and other benefits, total sitting fees to non-executive directors, proportion of salary, commission, perquisites and other benefits,

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sitting fees, size of the board (SIZE), proportion of non-executive directors in the board (PROP_NED), number of products produced by the firm (COUNT), product diversification index (D_INDEX), number of plant location (LOCATION), standard deviation of stock return (RISK), ROA, ADJQ, sales, advertisement expenditure intensity, R&D expenditure intensity, age of the firm. Standard deviation of each of the variables is shown in the parenthesis. All the variables are at constant price of 1993-94. Table 2 shows the Pearson Correlation Coefficient Matrix between the dummies for the firm belongs to business group (D_GROUP), for large firms (D_LARGE), TOTAL_COMP, COUNT, LOCATION, PROP_NED, SIZE, and dummies for the CEO if he is also chairman of the firm and if the CEO related to the founder of the firm or group.

I break the entire set of companies under seven scenario/cases, to get better idea about these variables under each case. These cases are shown along the column of the Table 1. First column show the General case, where I have taken all the firms together, followed by large firm and small firm cases. If the sales of the firms are larger than Rs.200 Cr., I consider them as large firms. All the CEO in India can be broadly classified into two categories: relative of the founder group and non-relative. Fourth column shows the cases where CEO is relative of the founder group. Last three columns i.e., column fifth to seventh, give the descriptive statistic of the sample, which is divided according to the number of products produced by firms (COUNT). In fifth column I consider the sample of firms where COUNT ≤ 3. In sixth column I consider the sample of firms where 3<COUNT ≤ 9. In the final column I consider the case where COUNT > 9. For the samples under each cases SALES, as a proxy for the size of the firm, varies so much that it can fairly capture the characteristics of the population.

Overall average total compensation of the board for my sample of firms is around Rs.53 Lakhs, for the large firms it is Rs.76 Lakhs and for the small firms it is only Rs.25 Lakhs. When the CEO is relative of the founders then board receives higher compensation than the overall average i.e. Rs.69 Lakhs. Average total compensation of the board is the highest for the sample where COUNT > 9 i.e., Rs.80 Lakhs. When number of products below 9 the total compensation is also quite less and the mean total compensation of the board vary from Rs.44-47 Lakhs.

Table 1: Descriptive Statistics

Column 1 shows the name of the variables. Columns 2 to 8 are the different cases under which mean and standard deviation of the variables are calculated. The Cases are: All firms, Large firms, Small firms, CEO cum Relative, number of products produced by the firm upto 3, in between 4 and 9 and greater than 9 respectively. Variables Total Compensation, Salary, Commission, Perks, Fees, ROA, ADJQ and SALES are in Rs. Crore. Note: All the nominal variables have been deflated and measured at constant price of 1993-94. The figures in the parenthesis are the standard deviation of the variables.

Variable	All firms	Large Firms	Small Firms	CEO cum REL	Count ≤ 3	3 < Count ≤ 9	Count > 9
TOTAL_COMP	0.535 (1.080)	0.763 (1.382)	0.255 (0.339)	0.692 (1.448)	0.471 (0.909)	0.438 (0.530)	0.800 (1.792)
SALARY	0.212 (0.271)	0.287 (0.325)	0.120 (0.137)	0.228 (0.268)	0.177 (0.269)	0.192 (0.197)	0.291 (0.367)
COMMISSION	0.209 (0.839)	0.321 (1.094)	0.073 (0.262)	0.341 (1.194)	0.222 (0.766)	0.133 (0.339)	0.344 (1.403)
PERKS	0.074 (0.129)	0.105 (0.162)	0.038 (0.050)	0.085 (0.156)	0.047 (0.078)	0.069 (0.115)	0.116 (0.183)
FEES	0.014 (0.044)	0.018 (0.054)	0.009 (0.026)	0.016 (0.057)	0.009 (0.021)	0.016 (0.056)	0.016 (0.034)
PROP_SAL	0.520 (0.244)	0.504 (0.054)	0.541 (0.249)	0.504 (0.250)	0.518 (0.267)	0.526 (0.235)	0.511 (0.233)
PROP_COMM	0.182 (0.242)	0.210 (0.254)	0.148 (0.221)	0.225 (0.273)	0.202 (0.271)	0.166 (0.222)	0.192 (0.243)
PROP_PERK	0.157 (0.135)	0.157 (0.134)	0.158 (0.137)	0.155 (0.131)	0.138 (0.138)	0.164 (0.132)	0.166 (0.137)
PROP_FEE	0.072 (0.182)	0.062 (0.153)	0.085 (0.211)	0.052 (0.136)	0.084 (0.220)	0.071 (0.176)	0.061 (0.138)
SIZE	10.565 (3.167)	11.501 (3.309)	9.416 (2.553)	10.459 (2.968)	9.736 (2.832)	10.583 (3.219)	11.506 (3.177)
PROP_NED	0.638 (3.167)	0.619 (0.171)	0.661 (0.163)	0.582 (0.151)	0.655 (0.175)	0.632 (0.163)	0.631 (0.172)
COUNT	7.538 (6.158)	9.241 (6.973)	5.466 (4.139)	7.041 (4.953)	2.167 (0.809)	6.173 (1.685)	15.368 (7.034)
D_INDEX	0.431 (0.277)	0.487 (0.273)	0.362 (0.265)	0.433 (0.260)	0.130 (0.175)	0.449 (0.215)	0.686 (0.165)
LOCATION	7.476 (7.120)	9.064 (7.638)	5.525 (5.870)	7.155 (6.212)	3.853 (5.484)	6.392 (4.391)	13.845 (8.835)
RISK	5.127 (3.038)	4.667 (2.171)	5.755 (3.839)	5.450 (3.556)	5.361 (3.360)	5.310 (3.292)	4.534 (1.902)
ROA	0.142 (0.127)	0.146 (0.084)	0.138 (0.166)	0.156 (0.087)	0.158 (0.199)	0.138 (0.079)	0.133 (0.087)
ADJQ	1.912 (6.356)	1.778 (5.744)	2.101 (7.127)	2.188 (7.065)	2.973 (8.770)	1.474 (4.344)	1.597 (6.343)
SALES	814.597 (3246.13)	1369.340 (4251.66)	104.564 (42.62)	509.564 (1751.16)	340.265 (677.87)	820.762 (4066.46)	1350.320 (3144.98)
ADVINT	0.016 (0.207)	0.012 (0.024)	0.020 (0.312)	0.009 (0.018)	0.030 (0.390)	0.011 (0.025)	0.008 (0.015)
R&DINT	0.004 (0.009)	0.005 (0.010)	0.003 (0.007)	0.005 (0.011)	0.003 (0.008)	0.004 (0.009)	0.005 (0.011)
FIRM_AGE	35.827 (23.821)	38.607 (23.230)	32.413 (24.110)	31.285 (21.683)	28.318 (21.393)	37.460 (23.809)	41.471 (24.439)
N	1435	791	644	664	409	678	348

All the components of the board compensation are higher for the large firms case or CEO is relative of the founders case or COUNT > 9 case. Proportion of salary and sitting fees to total compensation of the board is lower but the proportion of commission is higher in the case of large firm or for the firm where CEO is related to founders. Average proportion of salary and commission to the total compensation of the board in all firms case are 52 percent and 18 percent respectively. The former (latter) one decreases (increases) if the CEO of the board is relative to the founders.

Table 2: Pearson Correlation Coefficients Matrix.

Prob > |r| under H0: Rho=0. In the parenthesis the p-value is given.

	D_GROUP	D_LARGE	TOTAL_COMP	COUNT	LOCATION	D_INDEX	PROP_NED	SIZE	D_CH	D_REL
D_GROUP	1.000									
D_LARGE	0.236 (<.0001)	1.000								
TOTAL_COMP	0.023 (0.378)	0.234 (<.0001)	1.000							
COUNT	0.143 (<.0001)	0.307 (<.0001)	0.140 (<.0001)	1.000						
LOCATION	0.142 (<.0001)	0.258 (<.0001)	0.237 (<.0001)	0.691 (<.0001)	1.000					
DIVERSE	0.059 (0.006)	0.219 (<.0001)	0.100 (0.000)	0.638 (<.0001)	0.472 (<.0001)	1.000				
PROP_NED	0.013 (0.611)	-0.121 (<.0001)	-0.082 (0.002)	-0.051 (0.059)	-0.032 (0.223)	-0.047 (0.080)	1.000			
SIZE	0.151 (<.0001)	0.328 (<.0001)	0.191 (<.0001)	0.274 (<.0001)	0.242 (<.0001)	0.121 (<.0001)	0.000 (0.990)	1.000		
D_CH	-0.035 (0.190)	-0.067 (0.011)	0.076 (0.004)	-0.100 (0.000)	-0.113 (<.0001)	-0.031 (0.258)	-0.247 (<.0001)	-0.129 (<.0001)	1.000	
D_REL	-0.040 (0.128)	-0.112 (<.0001)	0.135 (<.0001)	-0.075 (0.006)	-0.042 (0.113)	0.008 (0.762)	-0.307 (<.0001)	-0.031 (0.240)	0.436 (<.0001)	1.000

Average size of the board (SIZE) of my sample is 11 for all the firms. When I divide the sample in to small and large firms then average board size for the small firms is 9 and for the large firms it is 12. Similarly for the cases, where COUNT ≤ 3, in between 4 and 9 and > 9, mean board size are 10, 11 and 12 respectively. On average two-third of the board is occupied by NED. But the proportion of NED is quite less when the CEO of the board is related to the founder. Large firms have lesser proportion of NED in the board. This indicates that small firms and the firms where CEO comes from

outside have better monitoring norm than others. This is supported by the high negative correlation coefficient between PROP_NED and D_LARGE and D_REL in Table 2.

All the measure of diversification is more for the large firms than the small firms. Means of the number of product produced by the firm (COUNT) for the all, large and small firms cases are 8, 9 and 5. For the firms where CEO is relative of the founder group, average COUNT is 7. Product diversification index (D_INDEX) is also more for the large firms than the small firms. D_INDEX for the all, large and small firms cases are 0.431, 0.487 and 0.362 respectively. Similarly for locational diversification (LOCATION), number of plant in different location, is more for the large firms. Obviously all the measures of diversification is higher for the case where COUNT > 9. One interesting point to note is stock return volatility is lower for the case of large firms and COUNT>9 cases only.

From Table 2 some more interesting features of Indian corporate sector came out very clearly and also support the findings from descriptive statistics. There is significant positive correlation between large firms and the group affiliated firms. Large firms and firms belong to business group has a positive correlation with diversification of the firm. In other words as the firm become larger it become more diversified which is quite logical. There is also strong positive correlation between product diversification (COUNT or D_INDEX) and locational diversification (LOCATION).

One interesting point to note is that there is a significant negative correlation between large firms and being a CEO to be chairman or related to the founder group. Further there is also strong positive correlation between the CEO to be related to founder group and the CEO to hold the Chairman post also. Total compensation has positive significant correlation with all the aforesaid variables except with proportion of NED. If the CEO is Chairman or related to the founder then diversification is quite less. Diversification of the firm decreases with the increase in the proportion of NED in the board. Size of the board has high positive significant correlation with the size of the firm as well as diversification of the firm.

Empirical Results

5. Determination of Board Compensation

5.1. Effect of Firm Performance on Board Compensation:

Table 3 shows that ROA of current year as well as previous year have positive and significant effect on the total compensation (TC) of the board for all the panels i.e., all firms, large firms and small firms cases. For 1 percent increase in ROA in the current and previous year, compensation of the board for the large firms increases by Rs.1.87 Cr. and Rs.1.34 Cr., which is larger than the smaller firms Rs.0.44 Cr. and Rs.0.7 Cr. respectively. Current year ADJQ has no significant effect on the board compensation. But, previous year firm performance in terms of ADJQ has significant positive effect on the compensation of the board. For 1 percent increase in ADJQ, board compensation for the large firm increases more than the small firms. Interpretation is that the scope of improvement in performance for the large firms is very less than compare to small firms. Therefore, for same 1 percentage increase in performance, board of the large firms compensated more than the small firms. My findings are in line with the findings by Rose and Shepard (1997); Brick etal. (2002), who also find past performance has positive effect on compensation. They also get current and past two years market based as well as accounting based performance measure has significant effect on compensation.

Risk is another indicator of firm performance. As the volatility or standard deviation of the stock return (RISK) of the last month of the financial year increases, the compensation of the board for all firms especially small firms falls. Board compensation of the large firms does not get affected with the increase in RISK. I have tried with the volatility of stock return for full year instead of volatility of last month of the financial year. But it has no significant effect on board compensation. Adverse impact of the volatility of the stock return on the compensation indicates the fact that shareholders are risk averse and they do not have long-term or persisting memory of stock price on setting the compensation. Only the volatility of the stock-price during the last month of the financial year has effect on the setting of compensation. Small firms are more risk averse than the large firms and therefore it affects the compensation of the board.

Table 3: Regression results of board compensation for all firms, large firms and small firms.

Panels A, B and C show the regression results for the sample of all firms, large firms and small firms. If the sales of the firm are more than Rs.200 Cr. then those firms are recognised as large firms otherwise small firms. The first column of each panel shows the estimated value of the parameters and the second column gives the p-value. This table shows the regression results of total board compensation on board size, proportion of NED in the board, total number variety of products produced by the firm, product diversification index, total number locations of plant of the firm, interaction of number of location and diversification index, risk of the firm measure in terms of standard deviation of stock return, three dummies as a proxy for identification of CEO e.g. Chairman, Relative, more than one CEO in the firm, current and previous year ROA and ADJQ and other control variables such as sales, advertisement intensity and R&D intensity, firm age dummy for the firms belong to business group. All the regressions include time and industry fixed effects. The sample covers the period from 1997 to 2002.

Variable	Panel A All firms		Panel B Large firms		Panel C Small firms	
	Estimate	P-Value	Estimate	P-Value	Estimate	P-Value
INTERCEPT	-0.850**	0.019	-0.194	0.779	-0.406**	0.020
SIZE	0.031***	0.002	0.021	0.179	0.029***	<.0001
PROP_NED	-0.011	0.952	0.133	0.633	-0.107	0.299
COUNT	-0.031***	<.0001	-0.042***	0.000	-0.011*	0.070
D_INDEX	-0.028	0.851	-0.253	0.322	-0.016	0.844
LOCATION	-0.027**	0.011	-0.068***	0.001	-0.001	0.877
LOCATION* D_INDEX	0.070***	<.0001	0.131***	<.0001	0.002	0.852
RISK	-0.018*	0.068	-0.030	0.227	-0.007*	0.059
D_CH	-0.043	0.526	-0.039	0.734	0.111***	0.002
D_REL	0.292***	<.0001	0.573***	<.0001	-0.012	0.731
D_MORE_CEO	0.252***	0.000	0.469***	<.0001	-0.015	0.675
ROA	1.333***	0.006	1.872**	0.018	0.442**	0.043
ADJQ	0.003	0.629	0.005	0.559	0.001	0.712
ROA_{t-1}	1.120**	0.026	1.338*	0.095	0.696***	0.002
$ADJQ_{t-1}$	0.016***	0.004	0.029***	0.002	0.004*	0.080
SALES	3E-04***	<.0001	3E-04***	<.0001	0.004**	0.017
$(SALES)^2$	-4.9E-09***	<.0001	-5E-09***	<.0001	1.7E-05**	0.034
ADVINT	4.582***	0.001	3.162	0.119	1.993**	0.023
R&DINT	10.567***	0.001	7.142*	0.098	9.068***	0.001
FIRM_AGE	-0.004***	0.006	-0.003*	0.099	-0.001**	0.044
R-Square	0.39		0.43		0.32	
Adj-R-Square	0.37		0.40		0.26	
F	18.06		12.86		5.13	
N	1202		709		491	

*** Significant at 1% level; ** significant at 5% level; * significant at 10% level.

Size of the firm is also an important determinant of the board compensation. Compensation of the board increases with the increase in the sales of the firm but at a decreasing rate. Table 3 shows that sales has positive impact on board compensation but square of sales has negative impact on board compensation. This support the previous finding by Penrose 1959, Main et. al 1970 etc.

5.2. Effect of different attributes of board structure and equity holding pattern on Board Compensation:

In Table 3, the analysis finds that as the board size increases, the board compensation also increases for all the firms and small firms significantly. For increase in proportion of NED, the decrease in board composition is not significantly different from zero. If the CEO becomes the Chairman of the board then the compensation increases significantly only for the small firms. When CEO is relative of the founder group then the board compensation increases significantly for all firms and large firms cases. For small firms D_REL has significant negative effect on board compensation. The argument for this finding is, many of the small firms in the sample are belongs to the large business groups, which belong to some family. As Table 2 shows that CEO and some other directors of these firms are mostly from the family of the founder and they also sit in the board as executive directors of the holding companies where they receive large amount of money. So, they do not take money from these small firms. So, board compensation decreases when CEO is related to founder group.

If there is more than one CEO in the board then also board receives significantly more compensation than the single CEO in the board for all firms and large firms cases. In this case the problem of free cash flow and moral hazard can be more serious. From this analysis it is clear that when CEO is Chairman of the board, board reaps extra benefits only from the small firms. Similarly when CEO is relative of the founder then board get extra mileage only for the large firms and subsidise the small firms. Another reason may be that when CEO of the firm is relative of the founder group the firm perform better especially if the firm is large.

Table 4: Effect of shareholding pattern in determining the total compensation of board

This table shows the regression results of total board compensation on the variables explained in Table 3 and three more variables on the shareholding patterns of the founders and government. The data on the equity holding is available for only 2001 and 2002 so, this regression is done for the period of 2001 and 2002 only. The three new variables are percentage shareholdings by founder(s), percentage shareholdings by government, institutional investors, interaction dummy for the CEO to be related with founder and group dummy and interaction of percentage shareholdings by founder and the dummy variable D_REL. First column shows the name of the variables, second column gives the estimated value of the parameters and the third column gives the p-value. All the regressions include time and industry fixed effects.

Variables	Estimate	P-Value
INTERCEPT	-0.620	0.404
SIZE	0.035	0.125
PROP_NED	-0.578	0.169
COUNT	-0.038**	0.027
D_INDEX	-0.285	0.386
LOCATION	0.001	0.955
LOCATION* D_INDEX	0.069*	0.052
RISK	-0.017	0.459
D_CH	0.036	0.815
D_REL	0.360	0.360
D_MORE_CEO	0.362**	0.013
ROA	2.279***	0.005
ADJQ	0.016	0.233
PROMS	0.010*	0.081
GOVTS	-0.026***	<.0001
INSTITUTES	-0.001	0.914
D_REL*D_GROUP	0.461**	0.029
PROMS *D_REL	-0.010	0.148
SALES	4E-04***	<.0001
$(SALES)^2$	-3E-09	0.243
ADVINT	3.243	0.226
R&DINT	11.162	0.109
FIRM_AGE	-0.007**	0.022
R-Square	0.52	
Adj-R-Square	0.47	
F	10.90	
N	421	

*** Significant at 1% level; ** significant at 5% level; * significant at 10% level.

I extended the analysis further by incorporating the equity holding pattern of the firm. As I discussed earlier that most of the earlier studies find that as the managerial holding increases the managerial compensation decreases. In India the data on the equity holding by individuals like CEO or managers are not reported. But we have data on equity holding by Founders, Government, Private Corporate Bodies, Institutional Investors and Others. In this analysis in Table 4, I consider five more variables on ownership pattern, percentage of holding by founder group, Government, Institutional investors, interaction of group dummy (D_GROUP) and dummy for the CEOs who are related of the founder (D_REL) and interaction between founder holding and D_REL.

In India the relative of the founders mostly dominates corporate board. Table 4 shows that as founder holding increases compensation of the board also increases significantly but as the government holding increases compensation of the board falls. If the firm belong to business group as well as the CEO of the firm is related to the founder then the board have some vested interest on the shareholding of the founder. In that case compensation of the board become significantly higher.

5.3. Corporate Diversification and board Compensation:

Corporate diversification has a very significant impact on setting the compensation of the board. Table 3 shows that as the number of product produced by the firm increases the board compensation falls for all the cases i.e., all firms, large firms and small firms cases. Similarly as the number of plants in different location increases board compensation falls for all the firms and especially large firms cases. Product diversification index (D_INDEX) has no significant effect on board compensation. The most interesting finding here is interaction between product diversification index and number of plant location of the firm has a very significant positive effect on the board compensation. The interpretation is that any unidirectional diversification (i.e., either product or location) does not help to increase the board compensation, because this can be harmful for the firm. Therefore, diversification can increase board compensation only if it is on the both direction i.e., product as well as location. Actually then only the operational difficulties increases and as a result compensation also increases.

Table 5: Regression results of board compensation at different level of product diversification.

Panel A, B and C of the table shows the regression results for sample of smaller range, medium range and large range of product diversification. The first column of each panel shows the estimated value of the parameters and the second column gives the p-value. . This table shows the regression results of total board compensation on board size, proportion of NED in the board, total number variety of products produced by the firm, product diversification index, risk of the firm measure in terms of standard deviation of stock return, three dummies as a proxy for identification of CEO e.g. Chairman, Relative, more than one CEO in the firm, current and previous year ROA and ADJQ and other control variables such as sales, advertisement intensity and R&D intensity, firm age dummy for the firms belong to business group. All the regressions include time and industry fixed effects. The sample covers the period from 1997 to 2002.

Variable	Panel A		Panel B		Panel C	
	Count <= 3		3 < Count <= 9		Count > 9	
	Estimate	P-Value	Estimate	P-Value	Estimate	P-Value
INTERCEPT	-1.677***	0.001	-0.694***	0.008	-2.284***	0.005
SIZE	0.064***	0.002	0.031***	<.0001	0.004	0.841
PROP_NED	0.873**	0.011	-0.209	0.112	-0.083	0.815
COUNT	-0.093	0.229	0.036**	0.011	-0.031***	0.001
D_INDEX	0.495	0.144	0.154	0.144	1.719***	0.000
RISK	-0.009	0.597	-0.015**	0.023	-0.044	0.198
D_CH	0.358***	0.008	0.008	0.869	-0.219	0.140
D_REL	0.060	0.643	0.174***	0.000	0.520***	0.001
D_MORE_CEO	0.031	0.820	0.066	0.164	0.192	0.227
ROA	1.677**	0.031	1.086***	0.000	1.927**	0.026
ADJQ	-0.002	0.775	0.003	0.690	0.015*	0.078
ROA_{t-1}	1.250*	0.100	-0.071	0.771	2.217**	0.016
$ADJQ_{t-1}$	-0.004	0.663	0.005	0.519	0.051***	<.0001
SALES	0.002***	<.0001	3E-05	0.101	3E-04***	<.0001
$(SALES)^2$	-3E-07***	<.0001	-5E-10	0.121	9E-09***	<.0001
ADVINT	3.749	0.188	6.316***	<.0001	2.083	0.586
R&DINT	17.911*	0.065	8.092***	0.000	10.517**	0.029
FIRM_AGE	-0.007**	0.028	0.000	0.668	-0.001	0.845
R-Square	0.47		0.37		0.80	
Adj-R-Square	0.40		0.33		0.77	
F	6.18		8.38		31.03	
N	276		586		317	

*** Significant at 1% level; ** significant at 5% level; * significant at 10% level.

The effect of variety of product range is not uniform across all the product range of the firms. Table 6 shows how the effect of product diversification on the board compensation varies over different range of product count such as small range of product (1 to 3), medium range of product (4 to 9) and large range of product (10 and onwards). For the firms that produce less variety of products i.e., number of product is upto 3, compensation of the board does not influence with the increase in the number of products. But the product diversification index has positive effect on the board compensation. This implies that within the lower range of diversification also if there is more equality among the different output produced, i.e., product diversification index increases then compensation of the board increases at 15% level of significance.

Table 6 shows that for the medium range product diversification i.e., number of product ranges from 4 to 9, as the number of product increases, compensation of the board also increase. Similarly within this range also as the product diversification index increases, board compensation also increases. However in the range where the number of products is very large, board compensation falls with the increase in total number of products. But if the products are produced more equally i.e., if D_INDEX increases then board compensation also increases very significantly.

All the results described in Table 6 can be summarized as the range of products increases compensation of the board increases only for the middle range of product diversification. For small number of product range it remains unaffected. For large number of product range board compensation actually falls with the increase in product count. But whatever be the range of products the more the diversification index, more will be the compensation of the board.

5.4. Determination of Different Components of Board Compensation

Table 7 shows the results of the regression equation of determination of different components of board compensation at level, whereas, Table 8 shows the regression results of proportion of different component of board compensation to total compensation of the board. Level of salary, the major fixed component of total compensation, increases with the increase in board size but decreases with the increase in proportion of NED.

Table 6: Regression results of different components to total compensation of the board at level.

Panels A, B, C and D of the table show the regression results of salary, commission, perquisites and sitting fees at level. Salary and perquisites are payable to only to the executive or whole-time directors. Sitting fees are payable to only non-executive directors. Commission is payable to both executives and non-executive directors, if there is sufficient amount of profit. The regressors are same as I have discussed in Table 3 i.e., board size, proportion of NED in the board, total number variety produced by the firm, product diversification index, number plant locations of the firm, interaction of number of location and diversification index, risk of the firm measure in terms of standard deviation of stock return, three dummies as a proxy for identification of CEO e.g. Chairman, Relative, more than one CEO in the firm, current and previous year ROA and ADJQ and other control variables such as sales, advertisement intensity and R&D intensity, firm age dummy for the firms belong to business group. The first column of each panel shows the estimated value of the parameters and the second column gives the p-value. All the regressions include time and industry fixed effects. The sample covers the period from 1997 to 2002.

Variable	Panel A Salary		Panel B Commission		Panel C Perquisites		Panel D Fees	
	Estimate	P-Value	Estimate	P-Value	Estimate	P-Value	Estimate	P-Value
INTERCEPT	-0.273***	0.000	-0.247	0.375	-0.057	0.173	-0.018	0.285
SIZE	0.017***	<.0001	0.005	0.525	0.008***	<.0001	0.000	0.708
PROP_NED	-0.158***	0.000	0.136	0.376	-0.016	0.503	-0.003	0.728
COUNT	-0.009***	<.0001	-0.019***	0.004	-0.003***	0.002	0.001	0.129
D_INDEX	0.104***	0.002	-0.239**	0.061	0.052***	0.007	0.018**	0.020
LOCATION	0.001	0.726	-0.026***	0.004	0.002	0.199	0.001*	0.089
LOCATION* D_INDEX	0.009***	0.010	0.054***	<.0001	0.001	0.649	-0.002**	0.021
RISK	-0.005**	0.045	-0.010	0.233	-0.002*	0.074	-0.001	0.453
D_CH	-0.008	0.621	-0.020	0.734	-0.016*	0.077	0.002	0.592
D_REL	0.006	0.674	0.243***	<.0001	0.027***	0.001	0.003	0.391
D_MORE_CEO	0.066***	<.0001	0.158***	0.007	0.019**	0.027	0.001	0.771
ROA	0.201*	0.071	1.099***	0.008	0.038	0.543	-0.003	0.919
ADJQ	0.004***	0.002	-0.002	0.752	0.000	0.832	0.000	0.658
ROA$_{t-1}$	0.400***	0.001	0.565	0.189	0.036	0.579	0.033	0.206
ADJQ$_{t-1}$	0.004***	0.005	0.009*	0.065	0.001	0.152	0.000	0.935
SALES	4E-05***	<.0001	2E-04***	<.0001	3E-05***	<.0001	3.5E-07	0.783
(SALES)^2	-7E-10***	<.0001	-3E-09***	<.0001	-4E-10****	<.0001	9E-12	0.715
ADVINT	2.915***	<.0001	0.084	0.940	1.214***	<.0001	-0.037	0.579
R&DINT	3.159***	<.0001	7.484***	0.006	0.332	0.420	0.191	0.252
FIRM_AGE	-0.001	0.250	-0.003***	0.010	-0.001***	0.003	0.000	0.887
R-Square	0.42		0.30		0.30		0.08	
Adj-R-Square	0.40		0.28		0.28		0.04	
F	20.30		11.81		11.75		2.27	
N	1181		1169		1143		1152	

*** Significant at 1% level; ** significant at 5% level; * significant at 10% level.

Table 7: Regression results of proportion of different components of compensation to total compensation of the board.

Panels A, B, C and D of the table show the regression results of proportion of salary, commission, perquisites and sitting fees to total compensation. . The regressors are same, as I have discussed in Table 7. The first column of each panel shows the estimated value of the parameters and the second column gives the p-value. All the regressions include time and industry fixed effects. The sample covers the period from 1997 to 2002.

Variable	Panel A PROP_SAL		Panel B PROP_COMM		Panel C PROP_PERK		Panel D PROP_FEE	
	Estimate	P-Value	Estimate	P-Value	Estimate	P-Value	Estimate	P-Value
INTERCEPT	0.642***	<.0001	0.170**	0.039	0.225***	<.0001	-0.027	0.626
SIZE	-0.006**	0.018	0.008***	0.000	0.004**	0.015	-0.004**	0.020
PROP_NED	-0.170***	0.000	0.051	0.230	0.005	0.847	0.058**	0.046
COUNT	-0.004**	0.017	0.000	0.922	0.001	0.414	0.003***	0.010
D_INDEX	-0.029	0.422	-0.037	0.300	0.026	0.231	0.004	0.861
LOCATION	0.003	0.290	-0.007***	0.004	0.005***	0.002	0.000	0.852
LOCATION* D_INDEX	0.002	0.626	0.007***	0.048	-0.007***	0.002	-0.003	0.302
RISK	0.005**	0.032	-0.011***	<.0001	0.000	0.876	0.005***	0.003
D_CH	0.015	0.359	0.016	0.325	-0.009	0.349	-0.014	0.204
D_REL	-0.064***	<.0001	0.088***	<.0001	-0.008	0.395	-0.011	0.314
D_MORE_CEO	0.006	0.711	-0.039**	0.015	0.015	0.129	-0.006	0.600
ROA	-0.401***	0.001	0.670***	<.0001	-0.193***	0.006	0.007	0.925
ADJQ	0.001	0.382	-0.001	0.667	0.000	0.709	-0.001	0.372
ROA$_{t-1}$	-0.266**	0.029	0.260**	0.028	-0.085	0.236	0.075	0.349
ADJQ$_{t-1}$	0.002*	0.085	-0.001	0.281	0.000	0.662	-0.001	0.336
SALES	7E-06	0.204	1.2E-05**	0.021	2.7E-06	0.401	4.5E-06	0.250
(SALES)^2	9E-11	0.416	-2E-10*	0.061	7E-11	0.275	8E-11	0.304
ADVINT	0.017	0.959	0.123	0.690	0.284	0.131	-0.291	0.159
R&DINT	-1.587**	0.042	2.659	0.000	-0.568	0.217	-0.315	0.541
FIRM_AGE	0.000	0.307	0.000	0.152	0.000	0.605	0.000	0.204
R-Square	0.17		0.26		0.11		0.08	
Adj-R-Square	0.14		0.24		0.07		0.05	
F	5.68		9.77		3.16		2.36	
N	1175		1163		1137		1146	

*** Significant at 1% level; ** significant at 5% level; * significant at 10% level.

However, proportion of salary to total board compensation decreases with both the increase in board size as well as increase in proportion of NED. For the case where CEO is relative of the founder group proportion of salary to total compensation decreases. This indicates that when CEO relative of the founder the possibility of moral hazard problem

is much less. Level of salary also increases with the increase in present and past performance of the firm i.e., ROA and ADJQ. But proportion wise salary increases only when ROA decreases not only for the current period but also for the last period. Salary of the board at level decreases when the stock return volatility increases. However, proportion of salary to total compensation increases with the increase in stock return volatility. Summarizing the results of Panel A in both Table 7 and Table 8 it can be infer that as the firms start perform badly salary (as fixed component) decreases but it decreases less compare to other components i.e., its proportion increases.

Level as well as proportion of commission, the prime variable component, increases when firm diversified in both the direction i.e., product as well as location, otherwise it decreases. Level of commission increases but proportion of commission falls when there is more than one CEO in the board. However when CEO is related to the founder group then level as well as proportion of commission both increases. Level as well as proportion of commission to total compensation falls when the stock return volatility increases. Proportion of commission increases with present and past performance of ROA From panel B of Table 6 and Table 7 shows that level as well as proportion of commission increases only when the firm performance improves.

The determination of level as well as proportion of perquisites and other benefits to the executive directors (another fixed component in the compensation) is quite similar to the determination of salary. As the board size increases level as well as proportion of perquisites and other benefits also increase. Level of perquisites decreases with the increase in product count, but it increases with the increase in diversification index (D_INDEX). Proportion of perquisites increases when current ROA falls i.e., firm performance goes down.

The determination of sitting fees of non-executive directors is not very much deterministic in nature. Sitting fees as a proportion of total compensation as well as level increases with the increase in number of product produced because monitoring become more difficult tusk. Further, proportion of sitting fees increase significantly, with the increase proportion of NED as well as increase in stock return volatility. But it decreases with the increase in board size significantly.

6. Determination of CEO compensation:

In the previous studies of India[15] it is found that managerial compensation depends positively on the age, experience and education or schooling year of the managers. This paper finds the result, different from the previous studies, which is shown in Table 8. Age and experience of the CEO are given in the annual reports. I calculate schooling year as (AGE – EXPERIENCE – 5). It is the fact that kids in India generally start their schooling at 5 years age. I take schooling year as a quantitative proxy for the EDUCATION. I did not find AGE and EDUCATION has any significant positive effect on the compensation of the CEO. Rather I have found that infirm-experience (INFIRM_EXP) of the CEO i.e., number of years that he/she (may not be as CEO) serves the firm has a positive significant effect on the compensation. But the relation between infirm-experience and CEO compensation is non-linear in nature. Compensation of the CEO increases with the increase in infirm-experience but at decreasing rate. The interpretation is that informational rent plays a crucial role in determination of the CEO compensation. If the CEO worked for larger periods in the firm he/she has more information about the firm and he/she can capitalised this information to increase his/her payoff. In India most to of the firms are family based. CEOs of these firms are mostly related to the founder groups. For these CEOs age does not matter, educational background of most of these CEOs is Commerce Graduate. They start their career from own family owned firm. This is the reason that infirm-experience turns out to be one of the most important factor in determining the compensation of the CEO.

Among the other determinants as the proportion of NED increases compensation of the CEO also increases. This supports the findings of Core et al., (1999). As the diversification of the firm in both the direction increases simultaneously i.e., location as well as product diversification, then compensation of the CEO also increases significantly. This supports the intuition that as the complexity in business increases compensation of the CEO also increases significantly. As the volatility of the stock return increases compensation of the CEO decreases but not very significantly. Compensation of the CEO increases as current period ROA increases or previous period ADJQ increases. It also increases with the increase in the intensity of the R&D expenditure.

Table 8: Determination of compensation of the CEO

This table shows the regression results of CEO compensation on the same set of regressors that have been described in Table 3 and added to the age of the CEO, education level of the CEO and infirm experience of the CEO and it's square. Education is measured by total number of schooling years. Infirm experiences measures by subtracting the year of joining from the current year. First column gives the name of the regressors and second and third column gives the estimated value of the corresponding parameters ant its p-value respectively. All the regressions include time and industry fixed effects. The sample covers the period from 1997 to 2002.

Variables	Estimate	P-Value
INTERCEPT	-0.360*	0.073
SIZE	0.007	0.125
PROP_NED	0.144	0.128
COUNT	-0.006	0.105
D_INDEX	-0.094	0.245
LOCATION	-0.005	0.328
LOCATION* D_INDEX	0.019**	0.020
AGE	3.5E-04	0.830
EDUCATION	0.004	0.406
INFIRM_EXP	0.011***	0.004
$(\text{INFIRM\_EXP})^2$	3.4E-04***	0.001
D_CH	0.051	0.126
D_REL	0.071**	0.021
D_MORE_CEO	-0.034	0.254
RISK	-0.006	0.253
ROA	0.419*	0.072
ADJQ	0.001	0.840
ROA_{t-1}	0.403*	0.087
ADJQ_{t-1}	3E-04	0.921
SALES	1.5E-04***	<.0001
$(\text{SALES})^2$	2.5E-09***	<.0001
ADVINT	0.281	0.714
R&DINT	6.511***	<.0001
FIRM_AGE	-0.002***	0.006
D_GROUP	0.049	0.148
R-Square	0.48	
Adj-R-Square	0.44	
F	11.42	
N	603	

*** Significant at 1% level; ** significant at 5% level; * significant at 10% level.

By the section 217(2A) in the Company Act, 1956, in India any public limited firms are supposed to give the personnel details of all the employees, if the person get compensation more than the threshold level, in the annual reports.

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[15] Saha and Sarkar (1999)

Table 9: Determination of the probability of the CEO compensation to be more than the threshold level

Panels A, B and C shows the regression results of the Tobit model for the year 1997 to1998, 1999 to 2000 and 2001 to 2002 respectively. The regressors are same as used in Table 3. There are two columns in each of these panels. First column shows the estimated value of the parameters and the second column shows the probability greater than Chi Square value. Log likelihood values are reported at the bottom of each of the panels. All the regressions include time and industry fixed effects.

	Panel A		Panel B		Panel C	
	Year 1997 and 1998		Year 1999 and 2000		Year 2001 and 2002	
Variables	Estimate	Pr > ChiSq	Estimate	Pr > ChiSq	Estimate	Pr > ChiSq
INTERCEPT	-0.021	0.929	-0.483**	0.041	-3.285	0.999
SIZE	-0.003	0.728	0.011**	0.023	0.018**	0.024
PROP_NED	0.126	0.438	0.177**	0.037	0.364**	0.017
COUNT	0.006	0.341	0.002	0.645	-0.010*	0.086
D_INDEX	0.005	0.966	0.132**	0.040	0.188*	0.076
LOCATION	0.000	0.991	-0.003	0.265	-0.001	0.868
RISK	-0.018*	0.081	-0.007	0.152	-0.030***	0.000
D_CH	-0.002	0.970	0.013	0.686	0.068	0.206
D_REL	0.072	0.174	0.149***	<.0001	0.158***	0.003
D_MORE_CEO	-0.050	0.350	-0.050	0.130	0.012	0.816
ROA	0.517	0.120	0.757***	<.0001	1.160***	<.0001
ADJQ	-0.001	0.801	0.001	0.555	0.009**	0.041
SALES	0.000	0.209	0.000***	0.001	0.000***	0.001
$(SALES)^2$	0.000	0.284	0.000***	0.007	0.000	0.919
ADVINT	-0.182	0.893	0.141	0.825	-0.312	0.746
R&DINT	8.903*	0.000	4.935***	0.001	4.748	0.048
FIRM_AGE	-0.001	0.331	-0.001	0.197	-0.001	0.313
D_GROUP	-0.016	0.790	0.026	0.436	0.102*	0.075
Total Obs. (N)	174		609		448	
Non-Censored	126		411		302	
Left-Censored	48		198		146	
Log Likelihood	-37.35		-217.7		-219.9	

*** Significant at 1% level; ** significant at 5% level; * significant at 10% level.

There are many firms in my sample for which I did not get the data on CEO compensation and other personnel attributes of the CEO due to this clause. In this section I determine the probability the compensation of the CEO will cross the threshold level. For the year 1997 and 1998 the threshold level was Rs.3 Lakhs, for the year 1999 and 2000 the threshold level was Rs.6 Lakhs and from the year 2001 till date it is Rs.12 Lakhs. So, I used Tobit model for this analysis.

Each of the panels in Table 9 shows the regression results of the Tobit model using two years panel data due to varying threshold over the six years of my sample periods. For all the years ROA of the firm and R&D expenditure intensity of the firm have positive impact on the probability of the CEO compensation to be more than the threshold level. However as the volatility of the stock return increases probability of the CEO compensation to be more than the threshold level decreases. The intuition is that if the performance of the firm is good then it always helps the CEO to get the compensation more than the threshold level.

For the year 1999 to 2002 the scenario has changed quite a bit. Probability of the CEO compensation to be more than the threshold level is now a increasing function of size of the corporate board of the firm, proportion of NED in the board and whether the CEO is relative of the founder groups. Different measures of diversification also have the positive impact in determining the probability especially; product diversification index has positive impact on determining the probability. For the year 2001 and 2002 stock return volatility and product count has adverse impact on the probability of the CEO compensation to be more than the threshold level. For this couple of years if the firms belong to any business group it actually increase the probability of the CEO compensation to be more than the threshold level. This finding substantiates the fact that when CEO is related to the founders then he/she receives higher salary.

7. Conclusion:

This paper tried to determine the effect of possible factors that determine the compensation of the CEO as well as the board at level. Further, I have also determined the different components of board compensation at level as well as proportion to total compensation of the board. Simultaneously it also determined the factors that determined the probability of the CEO compensation to be more than the threshold level. The determinants of the compensation used in this paper can be classified into four categories: performance of the firm, board structure, firm diversification and other firm specific economic factors. I have used present and past period of two measures of firm performance, ROA (accounting based measure) and ADJQ (market based measure). I have used five measures on board structure size of the board, proportion of non-executive

directors and three dummies: if the CEO also holds the Chairman position, if the CEO is relative of the founder group and if there are more than one CEO in the board. There are four measures on firm diversification: number of products produced by the firm (COUNT), diversification index of product (D_INDEX), number of places the firm has its plants (LOCATION) and interaction between D_INDEX and LOCATION.

This paper provides the evidence that as size of the board increases total compensation of the board as well as its different component also increases. Whereas proportion of non-executive directors has no significant effect on the total compensation of the board but it adversely affect the amount of salary in total compensation. If the CEO is Chairman of the board then it helps to increase the compensation of the board for the small firms only. When CEO is selected from the relative of the founder group or if there is more than one CEO in the board then it helps to increase the board compensation especially for the large firms. Similarly, if the CEO is Chairman of the board or relative of the founder group then he/she receives higher compensation at his /her personal account.

Current as well as previous year accounting based measure of firm performance (ROA) has positive significant effect on the board compensation and the compensation of the CEO. But only previous year market based measure of firm performance has positive significant effect on board compensation. Market based firm performance measure has no significant effect on individual CEO compensation. Any single dimensional diversification (product diversification or locational diversification) does not help to increase the board compensation of individual CEO. Diversification helps to increase the compensation of the board as well as individual CEO only if the firm diversify in the both directions. Intuition is, in that case the complexity in operating the firm increases. Excessive number of product diversification decrease the compensation of the board since, it reduces the value of the firm. From the Tobit model analysis in this paper I find that three attributes of the board structure size of the board, proportion of NED in the board and if CEO is relative of the founder helps to increase the probability that the CEO will cross the threshold. Similarly product diversification index and performance of the firm too helps to increase the compensation of the CEO to cross the threshold.

This paper can be further enriched if one can get the data on the employee stock option plan (ESOP). Till 2002 it was not mandatory for the firm to report the stock holding by the CEO and other directors in the board. In near future it expected to have the data in the annual reports, therefore, in the future this work can be extended with the help of this data.

Reference:

Aggarwal, Rajesh K. and Andrew A Samwick (2003), 'Why Do Managers Diversify Their Firms? Agency Reconsidered', *Journal of Finance,* 58(1), 71-118.

Bhattacherjee, Debashish, S.Jairam and G.Ravi Shankar (1998), 'Top Management Remuneration and Firm Performance: An Exploratory Analysis', Economic and Political Weekly, Review of Management and Industry, 33, M10-M15.

Brick Ivan E., Oded Palmon, and John K. Wald (2002), 'CEO Compensation, Director Compensation, and Firm Performance: Evidence of Cronyism', SSRN working paper series.

Brickley, James A., Jeffrey L. Coles and Gregg Jarrell (1997), 'Leadership Structure: Separating the CEO and Chairman of the Board', *Journal of Corporate Finance: Contracting, Governance and Organization*, 3(3), 189-22.

CII (1998), *Desirable Corporate Governance: A Code,* Confederation of Indian Industry

Cadbury, Adrian (1992), *The Cadbury Committee Report: Financial Aspects of Corporate Governance,* Burgess Science Press, UK.

Cheng, Shijun (2002), 'R&D Expenditures and CEO Compensation', SSRN working paper series.

Core, John E., Robert W. Holthausen and David F. Larcker (1999), 'Corporate Governance, Chief Executive Officer Compensation, and Firm Performance', *Journal of Financial Economics,* 51(3), 371-406.

Crystal, G., (1991), 'In Search of Excess: The overcompensation of American Executives', W. W. Norton and Company, New York.

Dechow, Patricia M. and Richard G. Sloan (1991), 'Executive Incentives and the Horizon Problem', *Journal of Accounting and Economics*, 14(1),51-89.

Duru, Augustine I. and David M. Reeb (2002), 'Geographic and Industrial Corporate Diversification: The Level and Structure of Executive Compensation', *Journal of Accounting, Auditing and Finance*, 17(1), 1-24.

Fama, Eugene F. and Michael C. Jensen (1983), 'Agency Problems and Residual Claims', *Journal of Law and Economics,* 26(2), 327-49.

Gibbons, Robert and Kevin J. Murphy (1991), 'Optimal Incentive Contracts in the Presence of Career Concerns: Theory and Evidence', National Bureau of Economic Research Working Paper: 3792.

Goyal, Vidhan K., Chul W Park (2002), 'Board Leadership Structure and CEO Turnover', *Journal of Corporate Finance: Contracting, Governance and Organization*, 8(1), 49-66.

Jensen, Michael C. (1986), 'Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers', American Economic Review, 76(2), 323-29.

Jensen, Michael C (1993), 'The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems', *Journal of Finance*, 48(3), 831-80.

Jensen, Michael C. and Kevin J. Murphy (1990), 'Performance Pay and Top-Management Incentives', *Journal of Political Economy*, 98(2), 225-64.

Holderness, Clifford G and Dennis P Sheehan (1998), 'Constraints on Large-Block Shareholders', National Bureau of Economic Research Working Paper: 6765, October 1998.

Huson, Mark R., Robert Parrino and Laura T Starks (2001), 'Internal Monitoring Mechanisms and CEO Turnover: A Long-Term Perspective', *Journal of Finance*, 56(6), 2265-97.

Khanna, Tarun and Krishna Palepu (1999), 'Emerging Market Business Groups, Foreign Investors, and Corporate Governance', National Bureau of Economic Research Working Paper: 6955.

KMB Report (1999), Report of the Kumar Mangalam Birla Committee on Corporate Governance: Security and Exchange Board of India.

Lambert, Richard A, (1993), The Use of Accounting and Security Price Measures of Performance in Managerial Compensation Contracts: A Discussion, *Journal of Accounting and Economics*, 16, 101-23.

Lewellen, Wilbur G. and Blaine Huntsman (1970), 'Managerial Pay and Corporate Performance', *American Economic Review*, 60(4), 710-20.

Main, Brian G. M., Charles A. O'Reilly III and James Wade (1995), 'The CEO, the Board of Directors and Executive Compensation: Economic and Psychological Perspectives', *Industrial and Corporate Change*, 4(2), 293-332.

Masson, Robert Tempest (1971), 'Executive Motivations, Earnings, and Consequent Equity Performance', *Journal of Political Economy*, 79(6), 1278-92.

Murphy, Kevin J. (1985), 'Corporate Performance and Managerial Remuneration: An Empirical Analysis', *Journal of Accounting and Economics*, 7, 11-42.

Murphy, Kevin J (1986), 'Incentives, Learning, and Compensation: A Theoretical and Empirical Investigation of Managerial Labor Contracts'*, RAND Journal of Economics*, 17(1), 59-76.

Palia, Darius (2001), 'The Endogeneity of Managerial Compensation in Firm Valuation: A Solution', *Review of Financial Studies,* 14(3), 735-64.

Penrose, E.G. (1959), *The theory of the Growth of the Firm,* New York: Wiley.

Reeb, David M., Chuck C. Y. Kwok and H. Young Baek (1998), 'Systematic Risk of the Multinational Corporation'*, Journal of International Business Studies*, 29(2), 263-79.

Roberts, D. R. (1956), 'A general theory of executive compensation based on statistically tested propositions', *Quaterly Journal of Economics*, 70, 270-94.

Rose, Nancy L. and Andrea Shepard (1997), 'Firm Diversification and CEO Compensation: Managerial Ability or Executive Entrenchment?', *RAND Journal of Economics,* 28(3), 489-514.

Rosen, Sherwin (1992), 'Contracts and the Market for Executives', In Lars Werin and Hans Wijkander, eds *Contract economics*, vol 5, Cambridge, Mass. and Oxford: Blackwell, 181-211.

Ryan, Harley E., Jr. and Roy A. Wiggins III (2001), 'The Influence of Firm- and Manager-Specific Characteristics on the Structure of Executive Compensation', *Journal of Corporate Finance: Contracting, Governance and Organization*, 7(2), 101-23.

Saha, Bibhas and Subrata Sarkar (1999), 'Schooling, Informal Experience, and Formal Sector Earnings: A Study of Indian Workers', *Review of Development Economics*, 3(2), 187-99.

Sarkar, Jayati and Subrata Sarkar (2000), 'Large Shareholder Activism in Developing Countries: Evidence from India,' *International Review of Finance*, 1(3), 161-194.

Shleifer, Andrei and Robert W. Vishny (1990), 'Equilibrium Short Horizons of Investors and Firms', *American Economic Review*, 80(2), 148-53.

Smith, Clifford W., Jr.; Watts, Ross L. (1992), 'The Investment Opportunity Set and Corporate Financing, Dividend, and Compensation Policies', *Journal of Financial Economics*, 32(3), 263-92.

Weisbach, Michael S. (1988), 'Outside Directors and CEO Turnover', *Journal of Financial Economics*, 20, 431-60.

Yermack, David (1996), 'Higher Market Valuation of Companies with a Small Board of Directors', *Journal of Financial Economics*, 40(2), 185-211.

Zhou, Xianming (2000), 'CEO Pay, Firm Size, and Corporate Performance: Evidence from Canada', *Canadian Journal of Economics*, 33(1), 213-51.