CORPORATE GOVERNANCE AND COMPANY PERFORMANCE- A STUDY WITH REFERENCE TO MANUFACTURING FIRMS IN INDIA

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Abstract

In this work an attempt is made to study the impact of corporate governance in the determination of firm value in the manufacturing firms in India. The purposing sampling method was adopted while choosing the sample firms that are listed in Bombay Stock Exchange (BSE). Out of 6000 firms listed in BSE, banking, insurance, financial firms were excluded as they are governed different bodes and their accounts and differently structured. Foreign firms, companies acquired during the period of investigation were also excluded, so the researchers choose a sample of 1732 firms and the relevant data were collected during the period 2001 to 2010. The data were analyzed using a multiple regression analysis to identify the factors that affect firm value. It is found that the firm value is significantly affected by the corporate governance variables for manufacturing firms.

Keywords: Corporate governance, Firm Value, Agency Theory, Manufacturing firms
CORPORATE GOVERNANCE AND COMPANY PERFORMANCE OF MANUFACTURING FIRMS IN INDIA

One of the emerging issues in the field of management is the aspect of corporate governance influence on the value of a firm (Mishra et. al. 2001; McConaughy et. al.1998; Khatri et al. 2001; Kwak, 2003; Black et al. 2003). Various studies in diverse domains like accounting, economics, finance, law and management (Mishra et al. 2001; Kwak, 2003; Black et al. 2003; Andersen and Reeb, 2003) have been conducted as to whether corporate governance have any impact on the determination of firm’s value. These studies have found interesting and useful observations. Gone are the days where security variables predominantly occupied the theory of determining the firm value. With the changing socio and economic structure more particularly in developing countries like India, it is important to examine the impact of corporate governance on the firm value. This paper examines the relationship between these variables on manufacturing firms in India.

In this context, first, we give a brief outline about the phenomena corporate governance and briefly trace out its coverage in the literature and derive the testable hypotheses. Secondly, we present the various indications that have been discussed in the firm’s value as a proxy for performance. The presentation of these concepts is followed by the research objectives and methodology adopted, the discussion and analysis is presented in the last part of the paper.
Theoretical Background and Research Hypotheses

Corporate Governance and Firm Value

An interesting question in the finance literature is whether the corporate governance practices of an individual firm influence its market value. Many researches have been conducted and varied findings have emerged (Black 2001; Daniel and Kim 2002; Gompers, Ishii and Metrick 2003). A survey carried out by McKinsey & Co., found that investors pursuing a growth strategy did not worry about corporate governance, but investors who pursued value strategy and invested in under-valued or stable companies were willing to pay for good governance. These investors has the belief that a company with good corporate governance will perform better over a period of time and that good governance can reduce the risk and attract further investment (Agrawal et al. 1996). Even though there is a growing literature on governance issues such as board composition, board leadership structure the results are unclear with respect to firm performance (Dalton et al. 1998). Many studies that have demonstrated positive relationships between variables of interest and firm performance, when meta-analytically reviewed show negative relationships and no statistically significant relationship at all (Dalton et al. 1998).

The diversity of results can be partly explained by differences in the theoretical perspectives applied, selected research methodologies, measurement of performance and conflicting views about the board involvement in decision making and to some extent the contextual nature of the individual firm. Even studies based on the integrative models encompassing board involvement, incorporating different theoretical perspectives and various board attributes such as board size, board composition and number of non-executive directors on the board provides inconclusive
results, suggesting that corporate governance has, at least an indirect effect on the company performance (Zahra and Pearce 1989; Jonnergard et al. 1995 and Maasen 1998).

However, many variables have commonly used in the literature as the indicators of corporate governance: Board size, Board composition, multiple classes of shares, number of meetings attended by directors, number of meetings held in a year, the existence of various committees like audit committee, remuneration committee and the like. Amongst all the above mentioned variables, the researcher here chose only board size and board composition as corporate governance indicators.

**MAJOR OBJECTIVES:**

Based on the above literature review, the present study revolves around the following two major objectives.

1. To test whether corporate governance variables influence the firm value;
2. To test the differentiation in the corporate governance practices between manufacturing companies and non-manufacturing companies

The rationale and support for choosing these variables for effective corporate governance which in turn influence firm value are presented in the succeeding paragraphs.

**Board size and firm value**

Historically, board size ranged from a very small (5 to 6) to very large (30 plus). A number of studies (Conference Board, 1962, 1967; Gordon, 1945) have found that the average size of board has remained the same in between 12 and 14 for the last 50 years or so. According to Vence (1983), “…there have been no reputable studies which show that the size of board increases proportionately to size of capital, net assets or even sales.” Chaganthi et al. (1985) argues that board size is a significant board attribute and affects board functions and eventually corporate
performance. Yermack (1996) documents that firms having small board sizes have higher stock market value. He finds an inverse relationship between firm value and board size by using a sample of large US corporations, Mishra et al. (2001) argues that smaller boards help to make decision more quickly. Kathuria and Dash (1999) argue that firm’s performance increases if the board size increased but the contribution of an additional board member decreases as the size of the board increases. Business Today in association with the Association of Indian Management Schools (AIMS, 1997) reports that there exists a positive and close relationship between the board size and firm value.

Based on the above literature, the following testable hypotheses are framed:

\( H_0: \) Board Size does not influence the firm value

\( H_1: \) Board Size does influence the firm value

**Board Composition and Firm Value**

Board consists of two different types of directors, executive and non-executive. Executive directors are responsible for the day-to-day affairs of the company. They have direct responsibility for business functions such as finance and marketing (Weir and Laing, 2001). They are full time employees of the company and have clearly defined roles and responsibilities. However executive directors are not in a strong position to monitor or discipline the CEO (Daily and Dalton, 1993). It is therefore important that there is a mechanism to monitor the actions of the CEO and executive directors and to ensure that they pursue shareholder interest. Dare (1993) argues that non-executive directors are effective monitors when ask firm’s strategy related questions. They are able to provide independent judgement when dealing with the executive directors in areas such as pay awards, executive director appointments and dismissals.
O’Sullivan and Wong (1999) records that non-executive directors in the board become less effective if they continue with the same board for many years.

If non-executive directors were effective monitors, this should result in improved corporate performance. However, two recent US studies have found that this is not to be the case. Yermack, 1996 and Bhagat and Black, 1999 found a negative relationship between the proportion of outside directors and corporate performance. Chaganti et.al. (1995) also found that there was no difference in the proportion of non-executive directors on the boards of failed and non-failed firms. Apart from the above, two other studies conducted in UK (Vageas and Theodorou 1998; Laing and Weir, 1999) do not find a relationship between the proportion of non-executive directors and corporate performance.

The basic reasons for no such positive relationship between non-executive directors and firm performance are such as part-time employment on non-executive directors, lack of highly technical issues and not getting sufficient information while taking key decisions (Laing and Weir, 1999).

Given the evidences on the corporate governance structures impact on firm value both in developed and developing countries, as shown above, the researcher have formulated the following hypothesis.

$H_0$: Board Composition does not influence the firm value

$H_1$: Board Composition does influence the firm value
**Data collection and operational definitions**

Data for computing the firm value, governance characteristics and promoters family influence of the selected companies were obtained from the various sources. The initial data sample was taken from the firms that are listed in the Bombay Stock Exchange (BSE) for the last ten years (2001 to 2010). This pool of firms in BSE was chosen because of the mandatory requirements on the part of these firms to submit corporate governance details to the stock exchange authorities.

Data were then collected for the years 2001 and 2010. The data for governance and control variables was obtained from the annual report of the firms as well as from CMIE PROWESS database.

The purposive sampling method was adopted in the selection of the sample firms for analysis. Of the 6000 firms listed in the BSE only 1732 which have not fallen into any of the following criteria alone, were considered.

a) Companies acquired during the period of investigation.

b) Availability of data for all variables for the above mentioned periods

After fulfilling the above conditions, we have got a final sample of 1732 firms, of which approximately 60 per cent of firms (1028) were manufacturing and remaining firms (704) non-manufacturing.
Operational Definitions of Variable selected

Since the variables selected for the study viz., corporate governance and firm value are the constructs which have been defined differently by different researchers in this field, and since no consensus definition of these variables is agreed upon in the literature, the authors have given the operational meaning to these variables as below:

1. **Firm value** is measured through a proxy for Tobin’s Q ratio. Tobin’s Q is defined as the ratio of market value of equity and market value of debt to the replacement cost of assets. But in Indian context calculation of Tobin’s Q is difficult because corporate debts are not actively traded in the debt market. Again Indian companies report asset values at historical costs rather than at replacement costs. Hence, we have calculated a proxy for Tobin’s Q which is defined as the ratio of market value of the firm to the book value of total assets, where the market value of the firm is measured by the sum of the market value of equity and the book value of total liabilities. This measure has been used extensively in similar studies by Morck et al., (1988), McConnaughy et al., (1998) Mishra et al., (2002). Khanna and Palepu (2000), Sarkar and Sarkar (2000) and Mohanty 2001 use a similar ‘Q’ value measure to examine the relation between shareholder concentration and firm value in India. We have taken the natural log of firm value.

2. **Corporate governance** is measured through three proxy variables namely Board size, Board composition and Multiple class of shares.

   *Board Size* is defined as the number of directors both executive and non-executive directors on the board of the firm.
*Board Composition* is defined as the proportion of representation of non-executive directors on the board.

**Control Variables**

Apart from the governance characteristics, the performance of a firm is influenced by other factors, which operate through the product and the capital market. In the empirical literature it is customary to control for the effect of these external factors to avoid any spurious relationship with the variables of interest and to single out the specific impact of promoter family control and corporate governance characteristic only on the firm value by including them as control variables. Accordingly, variables such as sales, firm’s age, financial leverage and asset tangibility are considered as exogenous variables in this study.

*Sales* are defined as the average sales (natural log) of the last seven years. It reflects the effect of unobserved factors, which are related to size. In the product market, size reflects possible entry barriers on account of economies of scale and size also reflects the market power of a firm. In the capital market, size reflects the ability of the larger firms to fund their investment projects from internal sources as well as their ability to raise additional funds through the issue of fresh common stock (Mishra et al. 2001; Sarkar and Sarkar, 2000).

*Age* is defined as the log difference between end of 2001 and firm’s founding year. It controls for the life cycle effect because profits of older and matured firms may be increased on account of good will and learning efforts (Randoy and Goel, 2001; Anderson and Reeb, 2001; Black et al. 2003).
Financial Leverage is the ratio of long-term debt to total equity plus retained earnings. The variable captures the effect of corporate tax shield (Anderson and Reeb, 2001; Sarkar and Sarkar, 2000).

Asset Tangibility is ratio of net fixed assets to total assets at end of 2002 (Mishra et al. 2001; Randoy and Goel, 2000).

Analytical Techniques

Considering the objective of the study and nature of the data collected, Multiple Regression Analysis (MRA) were performed. A ‘t’ test was conducted to find out the significant differences in the mean firm value and other variables of interest between Manufacturing Firms Non-Manufacturing Firms (NFCFs).

In order to find out the size of influence of promoter family control and each of the corporate governance characteristics on the firm value a multiple regression analysis was done. This was performed by controlling the effect of extraneous variable (firm performance indicators) such as sales, firm age, financial leverage and asset tangibility.

**Model 1**

\[ FV = \alpha (\beta_1 \times BS + \beta_2 \times BC) + \varepsilon \]

**Model 2**

\[ FV = \alpha (\beta_1 \times BS + \beta_2 \times BC + \beta_3 \times FS + \beta_4 \times FA + \beta_5 \times AT + \beta_6 \times FL) + \varepsilon \]

Where FV = Firm Value  
BS = Board Size  
BC = Board Composition  
FS = Firm Sales  
FA = Firm Age  
AT = Asset Tangibility  
FL = Financial Leverage
Analysis and Discussion

The below Table 2 presents the descriptive information about our sample firms. For all the variables means, medians, standard deviations and minimum and maximum values are computed.

Table 2
Descriptive Statistics for all Firms

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Median</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promoters Holding</td>
<td>53.01</td>
<td>50.85</td>
<td>15.40</td>
<td>26.00</td>
<td>99.33</td>
</tr>
<tr>
<td>Board Size</td>
<td>8.75</td>
<td>8.00</td>
<td>3.00</td>
<td>2.00</td>
<td>23.00</td>
</tr>
<tr>
<td>Board Composition (%)</td>
<td>0.01</td>
<td>0.00</td>
<td>0.04</td>
<td>0.00</td>
<td>0.56</td>
</tr>
<tr>
<td>Age ((years)</td>
<td>29.14</td>
<td>22.00</td>
<td>20.11</td>
<td>4.00</td>
<td>137.00</td>
</tr>
<tr>
<td>Financial Leverage (%)</td>
<td>3.08</td>
<td>2.49</td>
<td>3.82</td>
<td>0.01</td>
<td>47.83</td>
</tr>
<tr>
<td>Asset Tangibility (%)</td>
<td>0.41</td>
<td>0.41</td>
<td>0.20</td>
<td>0.01</td>
<td>0.94</td>
</tr>
<tr>
<td>Log Sales</td>
<td>1.88</td>
<td>1.90</td>
<td>0.91</td>
<td>2.22</td>
<td>5.13</td>
</tr>
<tr>
<td>Firm Value</td>
<td>2.11</td>
<td>2.04</td>
<td>0.78</td>
<td>0.07</td>
<td>4.97</td>
</tr>
</tbody>
</table>

One of the objectives of the study is to find out the impact of corporate governance on the firm’s value. For this purpose, the total sample of 1732 firms (as selected from the BSE) were classified into two categories, namely manufacturing firms and non-manufacturing firms. Manufacturing firms are define as those firms whose revenue are coming more than 50% from manufacturing activities and non-manufacturing firms are those firms whose revenue is coming from largely non-manufacturing activities. The firm value (natural log) of these sample firms
was computed using Tobin’s Q (the computational procedure is explained in the methodology section). The significant difference in the firm value and other variables of importance of these two categories of the firms was tested using a t-test, the results of which are reported in the Table No.3.

Table 4
Difference of Means Test

<table>
<thead>
<tr>
<th></th>
<th>Manufacturing Firms</th>
<th>Non-Manufacturing Firms</th>
<th>t - statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of Firms</td>
<td>1028</td>
<td>204</td>
<td></td>
</tr>
<tr>
<td>Promoters Holding</td>
<td>65.81</td>
<td>40.64</td>
<td>-39.52*</td>
</tr>
<tr>
<td>Board Size</td>
<td>8.64</td>
<td>8.85</td>
<td>1.01**</td>
</tr>
<tr>
<td>Board Composition</td>
<td>0.01</td>
<td>0.01</td>
<td>-1.59</td>
</tr>
<tr>
<td>Age</td>
<td>29.58</td>
<td>28.71</td>
<td>-0.60</td>
</tr>
<tr>
<td>Financial Leverage</td>
<td>3.05</td>
<td>3.11</td>
<td>0.20</td>
</tr>
<tr>
<td>Asset Tangibility</td>
<td>0.40</td>
<td>0.42</td>
<td>1.55</td>
</tr>
<tr>
<td>Log Firm Value</td>
<td>2.15</td>
<td>2.08</td>
<td>-1.25</td>
</tr>
<tr>
<td>Log Sales</td>
<td>1.94</td>
<td>1.81</td>
<td>-1.96</td>
</tr>
</tbody>
</table>

df = 769; *p>.01 ** p>.05

As shown in the table, the average firm value as computed using the Tobin’s Q method is found to be not significantly different for manufacturing firms and non-manufacturing firms. This difference was not significant t (769) = -1.25, p>.05 this finding reflects a totally different scenario in the firm value determination based on the activity of Indian firms. One possible reason for such a peculiar finding might be the fact that the firms were classified based on the 50 per cent revenue arising from that of a manufacturing activity. Perhaps, the findings might vary
if some other criteria for the classification of firms are taken, say, fixation of a 60 per cent. But at the same it is observed that there is a significant difference in the average shareholding between manufacturing and non-manufacturing firms.

The second objective of the study is to test whether there are significant differences in the corporate governance structure of manufacturing firms and non-manufacturing firms. For this purpose, it was hypothesized that the corporate governance structure would be different for firms in these two categories. As stated in the literature, the researchers have identified two major factors such Board size and Board Composition (measured in terms of proportion of non-executives directors). The mean values for manufacturing firms and non-manufacturing firms for each of the corporate governance variables as depicted in the above table reveal interesting observation. There is a significant differences exist between manufacturing firms and non-manufacturing firms in the corporate governance factors, namely the average board size and board composition. As it is evident, the mean board size for manufacturing firms is 8.64 while it is 8.85 for non-manufacturing firms. Hence board size is an important corporate governance factor differentiating manufacturing firms and non-manufacturing firms. The second factor, board composition has the mean value of .001 non-executive directors for manufacturing firms and .001 for non-manufacturing firms and the difference is not statistically significant. The possible reason may be only in 2004, the Indian Companies Act, 1956 made it mandatory for the firms to appoint Non-Executive directors in the board of the firms.
Table 4 provides a correlation matrix for all the key variables in the analysis.

Table 5
Correlation Matrix

<table>
<thead>
<tr>
<th>Variable</th>
<th>FV</th>
<th>PH</th>
<th>BS</th>
<th>BC</th>
<th>LS</th>
<th>Age</th>
<th>FL</th>
<th>AT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Value (log)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promoters Holding</td>
<td>0.07</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Board Size</td>
<td>0.60**</td>
<td>-0.02</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Board Composition</td>
<td>0.09**</td>
<td>0.02</td>
<td>0.04</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales (log)</td>
<td>0.31**</td>
<td>0.09**</td>
<td>0.18**</td>
<td>-0.01</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.27**</td>
<td>0.03</td>
<td>0.17**</td>
<td>-0.05</td>
<td>.08</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial Leverage</td>
<td>-0.06</td>
<td>-0.01</td>
<td>-0.05</td>
<td>-0.01</td>
<td>-0.02</td>
<td>-0.05</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Asset Tangibility</td>
<td>0.074</td>
<td>-0.07</td>
<td>0.07</td>
<td>-.08</td>
<td>.01**</td>
<td>-.01</td>
<td>-.04**</td>
<td>1</td>
</tr>
</tbody>
</table>

*correlation is significant at 0.01 levels  
**correlation is significant at 0.05 levels

From the above table it is observed that there is a strong positive correlation between firm value and board size, followed by sales, and age. Promoters holding and sales have a positive correlation. Asset tangibility and financial leverage have a negative correlation.

In order to find out the significant influence of the corporate governance components on the determination of firm value after controlling the firm performance variables such as sales, asset tangibility and financial leverage, all the variables were submitted for the Multiple Regression Analysis (MRA) and the coefficients, which indicate the amount of significance in respect of each of the selected factors. The firm-type was measured on a dummy coded measurement representing ‘1’ for manufacturing firms and ‘2’ for non-manufacturing firms. The Board size
was measured as the actual number of directors (inclusive of both executive and non-executive directors in the board of a firm). The Board composition was measured as the proportion of non-executive directors in the board of a firm). The variable sale was measured as the average sales (natural log) for the last seven year period.

<table>
<thead>
<tr>
<th>Table 6</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regression analysis (RA) of the impact of firm type corporate governance component factors on Firm Value</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Model- 1</th>
<th>Model - 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.480</td>
<td>0.340</td>
</tr>
<tr>
<td></td>
<td>(.15)</td>
<td>(.07)</td>
</tr>
<tr>
<td>Promoters Holding</td>
<td>1.106**</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>(.001)</td>
<td>(.001)</td>
</tr>
<tr>
<td>Board size</td>
<td>0.160*</td>
<td>0.004*</td>
</tr>
<tr>
<td></td>
<td>(.008)</td>
<td>(.005)</td>
</tr>
<tr>
<td>Board composition</td>
<td>1.490</td>
<td>0.77</td>
</tr>
<tr>
<td></td>
<td>(.64)</td>
<td>(.36)</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td>.002*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.001)</td>
</tr>
<tr>
<td>Financial Leverage</td>
<td></td>
<td>-0.005</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.003)</td>
</tr>
<tr>
<td>Asset Tangibility</td>
<td></td>
<td>0.180***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.060)</td>
</tr>
<tr>
<td>Log Sales</td>
<td></td>
<td>0.66*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.02)</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.369</td>
<td>0.797</td>
</tr>
<tr>
<td>ANOVA- F value</td>
<td>150.89*</td>
<td>431.98*</td>
</tr>
</tbody>
</table>

* significant at 0.01 levels;  **significant at 0.05 levels;  ***significant at 0.10 levels
standard errors are reported in parentheses
As seen from the above table, the multiple regression analysis results indicate that the firm value is found to be significantly affected by Corporate Governance factors when these variables are adjusted for the firm performance variables. In the controlling variables, age, sales and asset tangibility are found to be the contributing variable to the firm value. It is interesting to observe this trend. The overall model is significant at .01 level and the F-values are reported. While interpreting the results of these models it should also be remembered the method of defining variables of the study. For example, in this study the value for sales as one of the ‘financial performance’ variables is defined as the average sales of a firm over the last ten year period instead of the usual measurement of logarithm of sales. Perhaps, future studies should attempt to analyse the same data but taking the log sales of the firm to test the applicability of the model in the Indian context.

Limitations of the study:
The weaknesses of the study that are to be considered in making the implications about the findings of the research are given below:

1. The operational definition of manufacturing firm was made taking into account the percentage of the revenue generated from major activity. This incongruence classification of firms into manufacturing and non-manufacturing firm to the reality is a serious limitation of the study. Perhaps, the future researchers have to endeavour in bringing out an acceptable standard for the determination of firm status as manufacturing and non-manufacturing firms.

2. While the independent effect corporate governance characteristics on the firm value are analyzed, it is quite possible that the firm value might significantly be different if interaction effects between these two variables are considered. Perhaps, future researchers can consider this issue of dissecting the independent and interaction effect of these variables in explaining the effect of firm value.
Conclusion:
The present study is an attempt in analyzing the impact of corporate governance in the determination of firm value. The study also aimed at analyzing the significant differences in the corporate governance characteristics between the manufacturing firms and non-manufacturing firms. While many factors have been identified as the corporate governance components, only two of them were included for the study. This reveals the existence of correlation between firm value and board size. Furthermore, subsequent researchers can carry out research on this line will throw more light on this significant issue.
References


