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"Corporate Governance and Firm Performance: An investigation of Indian listed firms"

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Abstract

Since the time of the Enron accounting fraud, the world of business has paid attention to the concept of corporate governance. Indian business environment have gone through various landmarks in corporate governance history. Some of these are the Kumar Managalam Birla committee, Narayan Murthi committee, the Satyam Scam and the companies' act of 2013. These different landmarks have shaped what are today the corporate governance rules under the companies' act of 2013. The present study tries to investigate the relationship between the firm's corporate governance characteristics and the firm's performance. Spanning over the last 15 years i.e. 2003-2018 the study tries to find the impact of various corporate governance characteristics (Board Size, Independence of board, Institutional Investors and CEO Duality) on the firm's performance (Tobin's Q). The sample of the study is the companies listed on National stock Exchange 500 index during the sample period. The results found significant relationship between firm performance and board size, Institutional investors and CEO duality. There was no significant relationship between firm performance and board independence.

Introduction

Corporate accounting scams like Enron and Satyam have made businesses look at the concept of corporate governance really hard. Enron has been the stepping stone for all countries including India in shaping the laws that govern the present day corporations in India. The Company' Act 2013 has bought in lots of changes to the corporate governance rules ranging from independent directors on board to the removal of CEO duality and the presence of women directors too. These changes are aimed at bringing a more transparent and efficient governance mechanism in place. With a lot of issues in compliance and strong family owned firms corporate governance has a lot to be desired for in India.

A lot of research has taken place testing the impact of corporate governance on the firm's performance with varied results. Some studies have showed a positive relationship between governance and the firm's valuation or performance (Drobetz, Schillhofer, & Zimmermann, 2003)(Brown & Caylor, 2004) (Ahmed & Hamdan, 2015)(Bhatt & Bhatt, 2017). But there are other studies which could not validate these results. (Silva & Leal, 2005)showed insignificant positive relationship in a country where only 4% of firms have good corporate governance practices. (Varshney, Kaul, & Vasal, 2012) in a study of Indian firms could not validate a positive relationship with performance variables such Return on New Worth, Return on Capital Employed and Tobin's Q. A study by (Javaid, 2015) also pointed out that the relationship is dependent on the firm performance variable.

These studies point towards varied results and thus there is a need to strengthen the knowledge by conducting more research in the area. This study spanning across a long time period and with a good number of firms listed on the National Stock Exchange tries to add to the present knowledge stream.

Review of literature and Hypothesis Development

There has been a lot of research on the impact of corporate governance characteristics and firm performance. There are mainly two methodologies on which research has been conducted when corporate governance and firm performance have been studied. There is one being where some sort of cumulative index(Drobetz et al., 2003)(Brown & Caylor, 2005)(Fallatah, 2012)(Bhatt & Bhatt, 2017) are used to measure corporate governance and the other being individual characteristics (Kajola, 2008) (Mashayekhi & Bazaz, 2008)(Valenti, Luce, & Mayfield, 2011) of the same. Since we are using only individual characteristics in the study the review covers the studies that discuss the same.

For board size there has been a mix of results that have come up. Studies show negative (Mashayekhi & Bazaz, 2008)(Valenti et al., 2011)(Guo & Kga, 2012) ,positive(Tornyeva, 2012)(Azeez, 2015)(Arora & Sharma, 2016)(Hamdan, Buallay, & Alareeni, 2017)(Symeonidis, 1996)(Danoshana & Ravivathani 2019) (Ciftci, Tatoglu, Wood, Demirbag, & Zaim, 2019) and no significant (Chaghadari & Chaleshtori 2011) (Marashdeh, 2014) relationship between board size and firm performance. There is also a question over the size of the board. There have been various studies that have tried to distinguish between large and small sized boards. The results have also been unique with no apparent right answer. Both large(Tornyeva, 2012)(Arora & Sharma, 2016) and small sized boards(Azeez, 2015) have showed a positive significant impact on firm performance. Based on these varied results the hypothesis for the same is –

H_0 – There is no significant relationship between Board Size and Firm performance.

The number of independent board members has been a matter of great debate in the business corridors. The right qualified and number of independent directors is all the more important to performance of the company. Various countries over time have made it mandatory for boards to have a number of independent directors on board. India in its companies' act 2013 made it mandatory to have 50% of its total directors as independent directors. Studies over time have found that independent directors sometimes show an impact both positive and negative on the firm's performance(Guo & Kga, 2012) (Kumar & Singh, 2012) (Marashdeh,

2014)(Masulis, Wang, & Xie, 2012). There are studies whose results also show that there is no significant relationship between firm performance and board independence(Azeez, 2015). The proposed hypothesis for the same is as follows –
H_{01} – There is no significant relationship between Board independence and Firm performance.
When the controller is the same person who needs to be monitored, a question arises on the credibility of the governance mechanism. This is the concept of CEO duality. New guidelines suggest that CEO duality should not be present in firms i.e. the chairman and managing director/CEO should not the same person. Various studies over time have tried to understand the impact of CEO duality on firm performance(Kajola, 2008)(Lee, Lev, & Yeo, 2008) (Arora & Sharma, 2016). The proposed hypothesis being tested is –
H_{02} – there is no significant relationship between CEO Duality and Firm performance.
Institutional investors have been an important back of the governance ecosystem. These include investors like mutual fund houses, banks etc. They help keep a tight leash on the management in their action. Thus a number of studies have tried to connect institutional investors and firm performance. But a few number of research studies have found an insignificant relationship between the two variables (Mizuno, 2010)(Mashayekhi & Bazaz, 2008). On the contrary a few studies have also pointed out that the selection of company for investment is better firm's performance (Mizuno & Shimizi, 2015)(Maama, Mkhize, & Kimea, 2019)(Tornyeva, 2012).The hypothesis is –
H_{03} – There is no significant relationship between Institution investment and Firm performance.

Research Design

Sample and Sample Period, Data Sources, Variables under study

The time period of the study was 2003-2018. The period has been chosen based on the fact that it was only after the Enron scandal in 2001 that corporate governance became the center of attraction. In the next fifteen years in India various milestones have shaped the corporate governance practices and guidelines. Today corporate governance practices are a part of the Companies' Act 2013. The other milestones of importance have been the Birla committee, Narayan committee and Satyam fraud all during the period of the study.
The sample for the study was companies listed on the National Stock Exchange. The NSE 500 has been taken as the starting reference list. Companies which have continuously remained listed during the period of the study were taken part of the final sample. Also financial and government owned enterprises were excluded from the study as they are governed by guidelines other than the Companies' Act 2013. The final sample for the study was 157 firms. The study used a total 2355 observations. The data was taken from CMIE (Centre for Monitoring Indian Economy) database, Prowess and annual reports of the firm.
The analysis was carried out using panel regression.
The corporate governance characteristics used for the study based on the literature review are Board size, independence of board, Institutional investors and CEO duality. The firm performance variable used is a market based indictor Tobin's Q.

Table 1 – Sources of Data

Variables	**Source**
Independent variable | Firm Performance	
Tobin's Q	Prowess (CMIE Database)
Dependent Variable | Corporate Governance	
Board Size Independence of Board CEO Duality Institutional Investors	Firm Annual Reports
Control Variables	
Size of firm Age	Prowess (CMIE Database) Company Websites, Moneycontrol

Board Size – The total size of the board i.e. the number of total directors on the board of the firm has been taken into consideration.

Independence of board – The percentage of independent directors was taken into account. The formula for the same is as follows –

Independence of board = (Number of Independent Directors/Total board size)*100

Institutional Investors – Two variables i.e. One dummy variable for the presence or absence of institutional investors and the other being the total percentage of shareholding for institutional investors were used in the study.

CEO Duality – CEO duality is the presence of both positions, Managing Director/CEO and Chairman of board being held by the same person. The variable used for the same was a dummy variable which indicated the presence or absence of CEO duality.

As for the firm performance the market variable of Tobin's Q has been used which has been keeping in mind the direct impact of corporate governance practices and markets. The formula for Tobin's Q is as follows –

Tobin's Q = Total market value of the firm/Total asset value of the firm

Size of the firm measured through a log of the total assets and Age of the firm from its date of incorporation have been taken as control variables.

The model for the study is –

$$\textbf{Firm Performance} = \beta_0 + \beta_1 (\text{Board Size}) + \beta_2 (\% \text{ of Independent Directors on Board}) + \beta_3 (\text{Percentage shareholding of Institutional Investors}) + \beta_4 (\text{CEO Duality}) + \varepsilon$$

Research Analysis

Descriptive analysis was conducted for all dependent, independent and control variables. The mean size as in Table 2 for the boards was 10.2; also independence of boards came out to be 0.5 in line with the guidelines. Most companies had institutional investors pointing towards an efficient investment environment. The average ownership for institutional investors stood at 22.8%, a good enough

number to have an influential say in company decisions. The Mean for the Tobin's Q suggests that firms are overvalued, which is against the concept of market efficiency.

Variable Under Study	No. of observations	Mean	Std. Dev.
tobinsq	2025.0	15.3	26.8
boardsize	1818.0	10.2	2.6
Board Independence	1805.0	0.5	0.1
ceoduality	1827.0	0.3	0.5
Institutional Investor Dummy	1789.0	1.0	0.0
Institutional Investor Percentage	1779.0	22.8	13.4
size	2247.0	10.4	1.2
Age	2355.0	53.5	25.5

Table 2 - Descriptive Statistics

Next the correlation analysis was run for the firm performance and corporate governance variables. The results in table 3 suggest that firm performance has a significant relationship with Board Size, Institutional Investor percentage and Size of the firm. Other than board size, both institutional investors and the size of the firm had a negative significant correlation with firm performance.

Table 3 – Correlation Matrix

	Board size	Board independence	Ceo duality	Institutional percentage	size	Age
Tobin's Q	0.0598*	-0.0298	0.0190	-0.127***	-0.168***	0.0163

t statistics in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The next sequence of analysis was to first find the best model for the data. F-test, LM test and Hausman test were conducted to select between pooled OLS, Fixed effect model and Random effect model.

The F test with a P value less than 0.05 suggested that between the OLS and Fixed effect the fixed effect model was a better fit.

F test that all u_i=0: F (130, 1227) = 12.74 Prob > F = 0.0000

The second step was to check between the random effects model and Pooled OLS. For the same the LM test was run. The P value in table 3 was less than 0.05 which suggested that the random effect model was better as the data had panel characteristics.

Table 4 – LM Test

	Coefficient
Chi-square test value	2073.83
P-value	0

The next step was to decide between the fixed effect model and random effect model. To decide on the same the Hausman test was conducted. The Hausman test results in table 4 have a p value less than 0.05 suggesting that the fixed effect model

is the model fit for said panel data.

Table 4 - Hausman (1978) specification test

	Coefficient
Chi-square test value	132.205
P-value	0

Upon running the fixed model the regression results were as follows –

Table 5 - Regression Results

Tobin's Q – Dependent Variable	**Coefficient**	**Standard Error**	**p-value**	**Sig**
Board Size	-.98	.3129	.003	***
Independence of Board	-8.203	5.624	.145	
CEO Duality	6.15	2.092	.003	***
Percentage of Institutional Investors	-.422	.073	0	***
Size	-14.86	1.027	0	***
Constant	190.026	11.775	0	***
R-squared		0.198		
Prob > F		0.000		
SD dependent variable		21.309		
Number of observations		1363		
**** p<.01, ** p<.05, * p<.1*				

The results give up an R square of 19.8% and significant relationship between tobinq and board size, CEO duality and Institutional investor presence. Thus the equation is –

TobinsQ = -0.98* Board Size + 6.15*CEO Duality -0.422*Institutional investor percentage -14.86*Size +190.026

The results point toward the rejection of H_0, H_{02} and H_{03}. The hypothesis for board independence H_{01} has been accepted.

Conclusion, Implications and Way forward

The negative coefficient for board size suggests that large boards aren't really helpful for firm performance. The smaller the board the better is the firm's performance. An optimal size needs to be found so as to get highest level of efficiencies. Similar is the case of institutional investors which has a negative coefficient in the regression model. There needs to be an optimal level of institutional investors in the firm's shareholding. The coefficient for board independence is insignificant. This suggests that there is no impact of board independence on firm performance. The presence of CEO duality in Indian firms has been good for the performance of firms as shown by the positive coefficient of

CEO duality. This is line with stewardship theory. A lot of companies being family controlled could also be a reason.

For future research areas more corporate governance characteristics like meeting frequencies, compensation of managers, women directors etc. should be taken into account. Accounting based variables can also be used to gauge the firm's performance unlike only market based variable like Tobin's Q. Future research to identify optimal board size and investor's shareholding could also be done. Limitation for the study was due to time constraint fewer corporate governance variables were taken in the study.

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