Interrelation between Corporate Governance and Firm Performance: Evidence from Indian Real Estate Industry

A K Das Mohapatra

Professor, Sambalpur University, Department of Business Administration, Jyoti Vihar, Burla, Sambalpur, Odisha 768 019, India

Abstract

Majority of prior research studies have reported that good corporate governance results in better firm performance. This study conducted on the Indian Real Estate Industry using the CMIE Prowess data base especially the ProwessIQ(1.91) with 28 Large cap and Mid Cap categories of S&P BSE 500 companies over a period of 10 years 2008-09 to 2017-18, making a panel data of 280 observations with 7 cross sections data, also reveals that corporate governance, measured in terms of Board Structure, Audit Committee, Shareholders' Grievances, Remuneration Committee, Nomination Committee and Disclosure Practices, has a positive effect on the firm's performance when expressed in terms of Tobin's Q, Return on Assets (ROA) and Earnings Before Depreciation Interest Tax and Amortization (EBDITA). This finding therefore corroborates with most of the earlier observations that good corporate governance drives the firm's performance positively.

Keywords: *Corporate governance, Tobin's Q, Return on Assets, Earnings Before Depreciation Interest Tax and Amortization, Data staionarity, Harris Tzavalis Test, Cronbach's Alpha*

1. Introduction

Corporate governance and economic development are intrinsically linked. Effective corporate governance systems promote development of a strong financial system with its ultimate positive effect on the country's economic growth. It enhances access to external financing, and enhanced investments, higher growth and higher employment. Good corporate governance also lowers of the cost of capital by reducing risk, contributes to better resource allocation, higher return on investment, and higher firm valuation. It helps the firm build corporate image, and also to bringing economic vibrancy and prosperity. Good corporate governance can remove mistrust between different stakeholders, reduce legal costs and improve social and labor relationships and external economies like environmental protection. Despite of so many benefits accruing to the firms, as has been reported by different prior studies; cases of high profile financial scams, scandals, and corporate collapses in India and overseas have become rather a common phenomenon. The Harshad Mehta scrutiny scam, Ketan Parekh scam, CR Bansal scam, Satyam scam, Kingfisher scam, PNB scam, Coalgate scam or the 2G scam in India, or the Enron, WorldCom, Xerox overseas are only illustrative in the context as the list is so long.

Therefore, corporate governance has occupied the centre stage of industrial management today, owing primarily to the volley of high profile corporate scandals over the last couple of decades that shattered the trust of stakeholders, and the need and responsibility of the management to offer a fair and transparent administration as the stewards. Gaining the confidence of shareholders, creditors, lenders, customers, and every stakeholder at large thus has received the priority of corporate management today.

Corporate governance, defined more precisely as ‘a system by which corporations are directed and controlled’, is considered to have originated in the 19th century to propagate and promote the concept of ‘incorporation’ as a means of limiting liability (Vinten, 2001). It however gained more prominence in the Eighties due to the stock market crash across the globe, and the failure of corporate giants, primarily due to poor governance (Tricker, 2011). Prior studies on the interlink between corporate governance and firm performance have predominantly documented the existence of a strong positive association between corporate governance and higher firm performance (Yermack, 1996; Gompers et al., 2003; Cremers and Nair, 2005; Core et al., 2006; Bebchuck et al., 2009, Gompers et al., 2003; Bebchuck and Cohen, 2005; Bebchuck et al., 2009, La Porta et al.,2002, Klapper and Love, 2004, Durnev and Kim ,2005, Francis et.al. ,2005, Khanna et al., 2006, Drobetz et al.2004, Beiner et al. 2006, Black et al. 2006, Balasubramaniam et al. ,2009, Aggarwal et al. , 2009 Bruno and Claessens ,2010, Chhaochharia and Laeven ,2009, Gregg, 2001; Hilmer, 1998; Kiel and Nicholson, 200. Further, research studies have also indicated that improved corporate governance practices have resulted in enhanced growth and development of the country’s economy (Claessens, 2006; Clarke, 2004; Reed, 2002). Similar findings have also been reported by Balasubramanian et. al. (2008), Das and Dey(2016), Buallay et. al. (2017), Khatab et. al. (2011), Korrent et. al. (2015). However, the studies made by Ehikioya (2009) and Bhagat and Black (2002) could not find any such relationship, leading to the contradiction in the claim if good corporate governance leads to better firm performance. With this backdrop, the present paper examines if there exists any significant relationship between corporate governance and firm performance in the Indian context, especially the Real Estate Industry.

Although majority of prior research studies have produced affirmative evidence that good corporate governance results in better firm performance, the instances of poor governance keep on surfacing at frequent intervals resulting into corporate failures. The question therefore remains, especially in the Indian context, as to if industries are still shying away from appreciating the positive effect of corporate governance! Are they still not sure of the positive effects of corporate governance? This study endeavours to examine empirically if the performance of Indian industries is linked to their corporate governance practices, taking the Real Estate Industry as a sample unit. The underlying idea behind this study is to examine if there exists any interrelationship between corporate governance and firm performance and based on the finding(s) to recommend appropriate strategy for the firms for their better performance.

2. Data source and Research methodology:

This study has been undertaken based on secondary data. The data has been collected from the CMIE Prowess data base especially the ProwessIQ(1.91). The study covers a period of 10 years from 2008-09 to 2017-18. The Real Estate Industry in India has been chosen at random for the study as the sample unit. A total of 28 companies have been included in the study. The companies included are: N C C Ltd, J K Cement Ltd., D C M Shriram Ltd., Delta Corp Ltd., Cochin Shipyard Ltd., Techno Electric & Engineering Co.

Ltd, Indiabulls Real Estate Ltd., I R B Infrastructure Developers Ltd., K E C International Ltd., Akzo Nobel India Ltd., Prestige Estates Projects Ltd., Phoenix Mills Ltd., Dilip Buildcon Ltd., Aarti Industries Ltd., Reliance Infrastructure Ltd., Housing & Urban Development Corporation Ltd., P I Industries Ltd., G M R Infrastructure Ltd., N B C C (India) Ltd., A I A Engineering Ltd., Dalmia Bharat Ltd., A C C Ltd., Indiabulls Ventures Ltd., Container Corporation of India Ltd., D L F Ltd. and Ambuja Cements Ltd. These are the companies which fall under the large cap and mid cap category of the S&P BSE 500 clubbed under the 'Real Estate' based on the types of product they produce or deal with. Companies with a paid up capital of Rs 20,000 crore and above are considered as the Large Cap companies, whereas companies with a paid up capital of Rs 5,000 crore and above but less than Rs 20,000 crore are considered as the Mid Cap companies. Similarly, companies with a paid up capital of less than Rs5,000crore are considered as the Small Cap companies.

The Corporate Governance Score (CGS) for each of the 28 companies has been calculated based on data compiled from the respective company's Annual Reports. In all, six dimensions of corporate governance have been considered for the calculation of CGS. They are: (i) Board Structure, (ii) Audit Committee, (iii) Shareholders' Grievances, (iv) Remuneration Committee, (v) Nomination Committee and (vi) Disclosure Practices with assigned weightage of 25, 15,20,10,10, and 20 respectively. Reliability of the distribution of the weightage as above has also been checked through calculation of Cronbach's Alpha value. All the parameters and sub parameters included in the CGS have Cronbach's Alpha values ranging from 0.869 to 0.956, against the standard Cronbach's Alpha value of 0.700 to be reliable. As the data used in the study are panel data, stationarity of data has also been checked by using Harris Tzavalis (Unit Root) Test of data staionarity, p-value is less than 0.05 at 5% level of significance/. P-value less than 0.05 at 5% level of significance indicates that the data is stationary and therefore fits for panel construction and analyses.

Normalcy of the data used in the study to has been checked against the six corporate governance parameters as displaced in Fig.1.1(a), Fig.1.1(b), Fig.1.1(c), Fig.1.1(d), Fig.1.1(e), and Fig.1.1(f), for Board Structure, Audit Committee, Shareholders' Grievances, Remuneration Committee, Nomination Committee and Disclosure Practices, which who that the data used are normal.

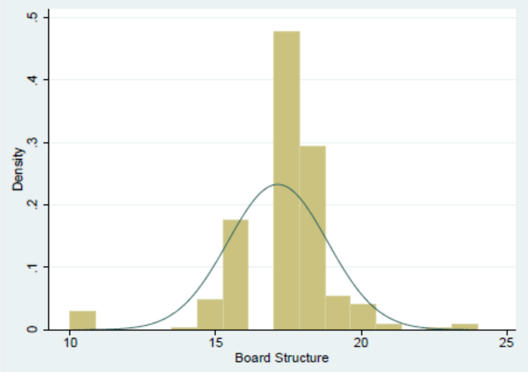
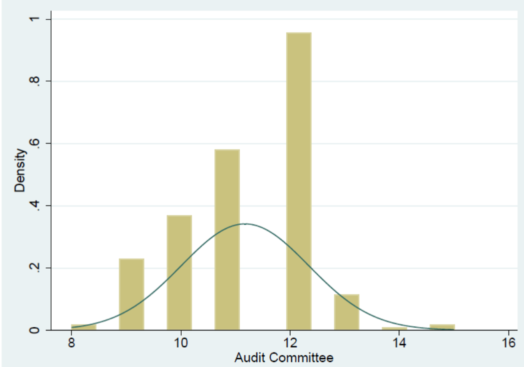
Fig 1.1 (a): Board Structure	***Fig 1.1 (b): Audit Committee***
	

Fig 1.1 (c): Shareholders' Grivances

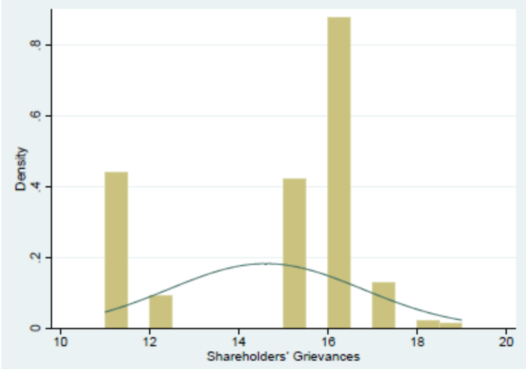


Fig 1.1 (d): Remuneration Committee

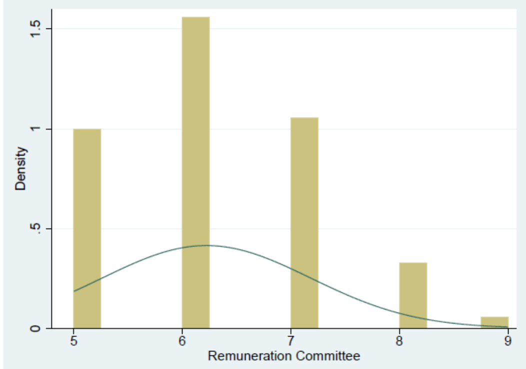


Fig 1.1 (e): Nomination Committee

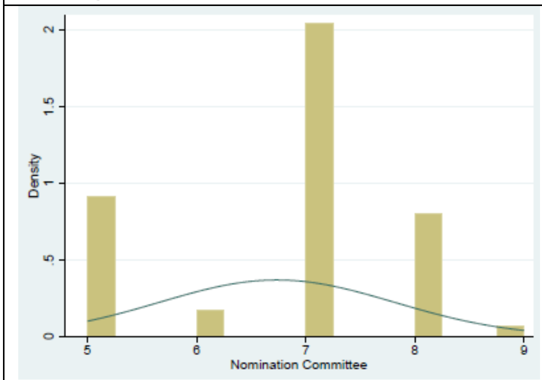
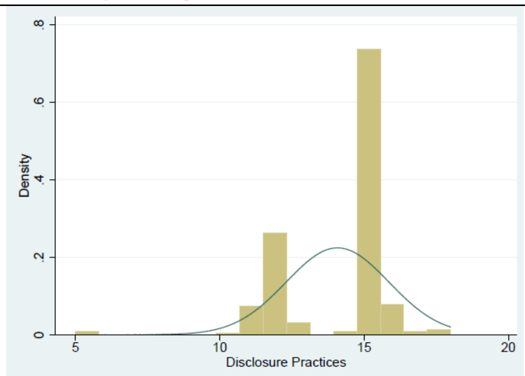


Fig 1.1 (f): Disclosure Practices



Source: Own collected data and analyses

The firms' performance has been measured in terms of Tobin's Q, Return on Assets (ROA), and Earnings Before Depreciation Interest Tax and Amortization (EBDITA). Whereas, Tobin's Q has been taken as: (Total market value of the firm + Total book value of the liabilities)/ (Total Book value of the Assets + Total Book Value of the Liabilities; ROA and EBDITA have been taken at their respective calculated values as contained in the Prowess data base for the period. Statistical tools, ANOVA and Regression analysis have been used for data analyses.

3. Result and Analysis:

As stated in the aforesaid paragraphs, the purpose of this study was to examine the interrelation that exists between corporate governance and firm performance in the Indian Real Estate Industry. This has been done taking two measures of firm performance, namely, corporate governance and Tobin's Q, and corporate governance and ROA, and corporate governance and EBDITA, ,based on a total of 280 observations (i.e., 28 companies X 10 years) with 7 cross sections (i.e., 6 Corporate Governance parameters X 1 Performance parameter) by conducting ANOVA and Regression analysis. The results have been displayed in Table 1.1, Table 1.2, and Table 1.3, respectively.

It is seen from Table 1.12that the F value is 0.000 which is less than 0.05 at 5 % level of significance. F value less than 0.05 at 5 % level of significance indicates that there exists a strong relationship between corporate governance and firm performance, measured in terms of Tobin's Q. The extent of relationship is also seen to be significant with R-Square of 0.5703, indicating that performance of Real Estate Industry measured in terms of Tobin's Q is influenced by corporate governance to an extent of 57.03%.

As regards the effect of individual parameters of corporate governance on the firm performance, i.e, Tobin's Q of Real Estate Industry, it is observed that Audit Committee(CG2) has the highest influence, followed by Board Structure (CG1), Remuneration Committee (CG4),Disclosure Practices (CG6), Nomination Committee(CG5), and Shareholders Committee (CG3).

The interrelationship between corporate governance and ROA in Real Estate Industry, Table 1.2 shows that the F value is 0.000 which is less than 0.05 at 5 % level of significance. F value less than 0.05 at 5 % level of significance indicates that there exists a strong relationship between corporate governance and firm performance, measured in terms of ROA.

Table 1.1: Results of ANOVA and Regression analysis of corporate governance in relation to Tobin's Q in Real Estate Industry

ANOVA						
Source	SS	df	MS			
Model	13635.4288	33	413.194811			
Residual	10275.31	246	41.7695529			
Total	23910.7388	279	85.7015727			
REGRESSION						
Number of observations	280					
F(33, 246)	9.89					
Prob> F	0.0000					
R-squared	0.5703					
Adj R-squared	0.5126					
Root MSE	6.4629					
Tobin's Q	Coef.	Robust Std. Err	t	P>|t|	95% Conf. Interval	Interval
CG1	1.981185	.3404276	5.82	0.000	1.31066	2.651709
CG2	3.171033	.7571843	4.19	0.000	1.679642	4.662424
CG3	-1.609004	.5716412	-2.81	0.005	-2.734939	-.4830685
CG4	1.974297	.792072	2.49	0.013	.4141888	3.534405
CG5	-.4191991	.8630405	-0.49	0.628	-2.11909	1.280692
CG6	.4673433	.3911938	1.19	0.233	-.3031732	1.23786
Cons	-53.8799	6.631384	-8.12	0.000	-66.94143	-40.81837

Note: CG1=Board Structure, CG2= Audit Committee, CG3= Shareholders Grievance, CG4= Remuneration Committee, CG5= Nomination Committee, and CG6= Disclosure Practices
Source: Own collected data

The extent of relationship is also seen to be significant with R-Square of 0.5962, indicating that corporate governance determines the firms' performance, measured in terms of ROA, to an extent of 59.62%.

With regard to the effect of individual parameters of corporate governance on the firm performance, i.e, ROA, it is observed that Nomination Committee (CG5) has the highest influence on the firm performance, followed by Shareholders Grievance (CG3), Disclosure Practices (CG6), Audit Committee (CG2), Board Structure (CG1) and Remuneration Committee (CG4).

Therefore, the Real Estate Industry in India needs to focus on Nomination Committee, followed by Shareholders Grievance, Disclosure Practices, Audit Committee, Board Structure and Remuneration Committee to improve upon its performance measured in terms of Return on Assets.

Similarly, the interrelationship between corporate governance and firm performance measured in terms of EBDITA for the Real Estate industry has been examined based on a total of 280 observations (i.e., 28 companies X 10 years) with 7 cross sections (i.e., 6 Corporate Governance parameters X 1 Performance parameter) by conducting ANOVA and Regression analysis. The results have been displayed in Table 1.3.

It can be observed from Table 1.3 that the F value is 0.0000 which is less than 0.05 at 5 % level of significance. F value less than 0.05 at 5 % level of significance indicates that

Table 1.2: Results of ANOVA and Regression analysis of corporate governance in relation to ROA in Real Estate Industry

ANOVA			
Source	**SS**	**df**	**MS**
Model	.51973925	33	.015749674
Residual	.351989441	246	.001430851
Total	871728691	279	.003124476

REGRESSION	
Number of observations	280
F(33, 246)	11.01
Prob> F	0.0000
R-squared	0.5962
Adj R-squared	0.5421
Root MSE	.03783

ROA	**Coef.**	**Robust Std. Err**	**t**	**P>|t|**	**95% Conf. Interval**	**Interval**
CG1	-.0034241	.0019925	-1.72	0.087	-.0073486	.0005003
CG2	-.0031028	.0044317	-0.70	0.485	-.0118317	.0056261
CG3	.0007729	.0033457	0.23	0.817	-.005817	.0073628
CG4	-.0093549	.0046359	-2.02	0.045	-.018486	-.0002239
CG5	.0116528	.0050512	2.31	0.022	.0017036	.021602
CG6	.0001824	.0022896	0.08	0.937	-.0043273	.0046921
Cons	.1034377	.0388125	2.67	0.008	.0269905	.1798849

Note: CG1=Board Structure, CG2= Audit Committee, CG3= Shareholders Grievance, CG4= Remuneration Committee, CG5= Nomination Committee, and CG6= Disclosure Practices

Source: Own collected data

there exists a strong relationship between corporate governance and firm performance, measured in terms of EBDITA.

The extent of relationship is also seen to be significant with R-Square of 0.9328, indicating that corporate governance determines the firms' performance, measured in terms of EBDITA, to an extent of 93.28%.

With regard to the effect of individual parameters of corporate governance on the firm performance, i.e, EBDITA, it is observed that Nomination Committee (CG5) has the highest influence on the firm performance, followed by, Disclosure Practices (CG6), Shareholders Grievance (CG3), Board Structure (CG1). Audit Committee (CG4), and Remuneration Committee (CG2). Therefore, the Real Estate Industry in India needs to focus on Nomination Committee, followed by Disclosure Practices, Shareholders Grievance, Board Structure, Audit Committee, and Remuneration Committee to improve upon its performance measured in terms of Earning Before Depreciation, Interest, Tax and Amortization.

Table 1.3: Results of ANOVA and Regression analysis of corporate governance in relation to EBDITA in Real Estate industry

ANOVA			
Source	**SS**	**df**	**MS**
Model	787606332	33	23866858.5
Residual	56778139.8	246	256914.66
Total	844384471	279	3324348.31

Regression	
Number of observations	280
F(33, 246)	92.90
Prob > F	0.0000
R-squared	0.9328
Adj R-squared	0.9227
Root MSE	506.87

EBDITA	Coef.	Robust Std. Err	t	P>|t|	95% Conf. Interval	Interval
CG1	-54.05705	33.24215	-1.63	0.105	-119.5692	11.45512
CG2	-99.98843	66.37238	-1.51	0.133	-230.7922	30.81536
CG3	-44.24336	46.7156	-0.95	0.345	-136.3084	47.82171
CG4	-54.24446	67.98507	-0.80	0.426	-188.2265	79.73754
CG5	92.24781	71.38884	1.29	0.198	-48.4422	232.9378
CG6	33.3413	31.12136	1.07	0.285	-27.9913	94.67391
Cons	4235.777	667.7444	6.34	0.000	2919.815	5551.738

Note: CG1=Board Structure, CG2= Audit Committee, CG3= Shareholders Grievance, CG4= Remuneration Committee, CG5= Nomination Committee, and CG6= Disclosure Practices
Source: Own collected data

4. Broad Findings:

Analyses of the results clearly indicate that firm performance is positively influenced by the corporate governance practices of Indian Real Estate Industry. Of the six parameters of the corporate governance considered under the study, Board structure, Audit committee, Disclosure practices and Shareholders grievances have received more priority in terms of their relative individual influence in determining the performance.

Further, the study also reveals that the interrelationship between firm performance and corporate governance forms the following econometric relationship in between:

$$\textit{Real Estate Industry (Performance Indicator)}_{it} = \alpha_i + CG1_{it}\beta + CG2_{it}\beta_1 + CG3_{it}\beta_2 + CG4_{it}\beta_3 + CG5_{it}\beta_4 + CG6_{it}\beta_5 + \varepsilon_{it}$$

5. Conclusion and recommendation:

Corporate governance, originated in the 19th century to propagate the concept of ‘incorporation’ as a way of limiting liability, gained prominence in the Eighties due to the stock market crash across the globe. The large scale corporate failure including giant corporations like the Enron and WorldCom over the past decades have brought it to the centre stage of corporate management today. Defined as ‘a system by which companies are directed and controlled’, corporate governance has become a de facto bench mark for corporate performance and corporate image building. Prior studies have indicated that good corporate governance results in better firm performance. This study too has indicated that there exists a positive interrelation between corporate governance and firm performance in the Indian Real Estate Industry measured in terms of Tobin’s Q, ROA and EBDITA.

The present study also reveals that board structure, audit committee, disclosure practices and shareholders grievances influence the most performance of the Real Estate Industry in India. Having said that better the corporate governance higher is the firm performance as established though this study, Indian Real Estate Industry need to strengthen all the six parameters of governance with special focus on board structure, audit committee, disclosure practices and shareholders grievance.

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