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An empirical study of corporate governance and firm performance: Selected CNX nifty companies

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Abstract
The present article endeavors to analyze internal association among corporate governance, capital structure, ownership structure, and firm performance in India. The study practices panel data of all CNX Nifty companies from 2015 to 2019. By using LSDV panel data models and 2SLS model the outcome reveals that that good corporate governance practices adopted by companies are positive in regards of financial performance. Board independence, number of board committees, and director remuneration are found to have positive relationship while Number of Directors, ownership by promoters, and financial leverage have negative relationship with performance. It has been observed bi-directional relationship between corporate governance and financial performance. Companies with sound financial performance are more likely to conform to corporate governance norms and standards and implement sound corporate governance system. Further, the outcomes disclose that corporate governance practices adopted by the listed firms depend on their ownership structure. Ownership concentration is found to effect corporate governance negatively.

Keywords: corporate governance, composition of board, firm financial performance, ownership structure

Introduction

Corporate governance is a set of association among management, board, shareholders, and other stakeholders. It establish the structure through which the various objectives of the company are decided and the means of attaining those objectives and monitoring performance are determined (OECD, 2004) [16]. There has been noticed reasonable consensus among practitioners and academicians about the importance of good corporate governance in the economy. (Leora & Inessa, 2004) Good corporate governance contributes to sustainable economic development by enhancing the stability and performance of companies (Mallin, 2008) [20]. In the beginning, the word Corporate Governance increases access to external financing for companies. Then, it can lower the cost of the capital and raise the value of the firm, making investments more preferable, and in return it can lead to growth and more employment. Additionally, good governance produces better operational performance through better allocation of resources and better management. It reduces the risk of financial crises, which can have devastating economic and social costs. Moreover, it leads for better association with all stakeholders, and thus expand and improves labor relations as well as the climate for improving social aspects such as environmental protection. (Bebchuk, Cohen, & Ferrel, 2009) [5]

There are so many important empirical studies have been accompanied over the last two decades to examine correlation between corporate governance and a financial performance of firms in the world. Most of the research in the area of corporate governance is done for developed economies, as rich data is available for these economies where active market for corporate control exists and the ownership concentration is low. In India, like many developing countries, is considered relatively weak investors' protection and enforcement of corporate law. It is also considered by the cross-shareholdings, ownership concentration, pyramid structure, and the dominance of family business (Mohanty, 2004).

Since it has been given financial liberation in 1991, India has passed under significant corporate governance reform. The Securities and Exchange Board of India (SEBI), India's securities market regulator, was formed in 1992. By the mid-1990s, the Indian economy was growing steadily, and Indian firms began to seek equity capital to finance expansion into the market spaces created by liberalization and the growth of outsourcing. The need for capital, amongst other things, led to corporate governance reform. The Confederation of Indian Industry (CII), an association of major Indian firms, issued a voluntary Corporate Governance Code in 1998, and then pressed the government to make central elements of the code mandatory for public firms, which SEBI did the following year, by adopting a reform package known as Clause 49 (Balasubramanian, Black, & Khanna, 2009) [3]. However, the policy impact of the regulations to enhance corporate governance in India in terms of improved performance of the listed companies has not been investigated sufficiently. Although some studies (Mohanty, 2004; Chakrabarti *et al*., 2007; Dharmapala, 2011; Saravanan, 2012) have studied the impact of corporate governance on the firm performance, there are few studies in Indian context that examine endogenous inter-relationships among corporate governance, ownership structure, capital structure, and firm performance. Hence, this study attempts to empirically examine the extent to which corporate governance has an impact on overall firm performance in context of emerging country. The focus of the study is to examine the causal relationship between corporate governance and firm performance for publicly listed National Stock Exchange (NSE) firms and also investigate the inter-relationship between corporate governance, performance, ownership, and capital structure.

Literature Review

At the theoretical level, agency theory identifies several reasons why good corporate governance increases firm value and performance (Shleifer & Vishny, 1997) [23]. It posits that corporate governance issues arise due to the separation of ownership and management. Berle and Means (1932) conclude that modern corporations are characterized by an inefficient corporate governance structure because ownership is separated from control of the firm. Jensen and Meckling (1976) [15] and Fama and Jensen (1983) [15] also concluded that agency costs occur when the owner and manager are not one. Hence, agency theory is the starting point of most discussions of corporate governance. Corporate managers may have personal goals that conflict with the long-term shareholders' objective of wealth maximization. As a result corporate managers pursue actions that fulfill their own personal interests (Drucker, 1954) at the expense of shareholders.

There are several research studies that examine the extent to which "good" governance characteristics positively impact a firm's performance. One of the noteworthy studies is by Stulz (1990) [13] in which the author argues that good governance should positively impact a firm's market valuation and performance, presumably because better governance gives the firm increased access to capital markets and allows it to obtain capital at more favorable terms. This view is also supported through anecdotal evidence coming from surveys conducted by McKinsey & Company, which show that investors are more than willing to pay a premium for firms employing better governance practices (Davis, Schoorman, & Donaldson, 1997) [10].

The effectiveness of boards of directors has been shown to depend on the board's size. Early studies by Lipton and Lorsch (1992) [19] and Jensen (1993) [15] propose that large boards are ineffective. They argue that the benefits of a large board are outweighed by the costs of slower decision making, less candid discussions of managerial performance, and biases against risk taking. Both of these studies also contend that as the board of directors get bigger, they become less effective because free-riding problems erupt and decisions become harder to make in a timely manner. In contrast, Baker and Griffith (2010) [4] find a positive relationship between size of the board and both company performance and effective board monitoring.

The inter-relationship between corporate governance, ownership structure, capital structure, and firm performance are endogenously determined. For instance, firm performance is both a result of the actions of previous directors and a factor that potentially influences the choice of subsequent directors. Also, factors related to unique company characteristics, such as ownership structure and leverage, may affect corporate governance choices and generate spurious correlations with performance. Baker & Anderson (2010) [1] opine that controlling for all these aspects is difficult when constructing country-level or company-level corporate governance indicators and studying their effects on performance. To conclude, more research in the area is needed to find conclusive empirical evidence.

Methodology: Data Explanation

The study analyze and explores the inner connection between different variables related to corporate governance mechanisms and firm performance of Nifty-50 National Stock Exchange (NSE) listed firms. The data for the research study was acquired from Prowess database, maintained by the Center for Monitoring the Indian Economy (CMIE). Prowess reports of share prices, financial statements, corporate governance indicators, and other relevant data for publicly traded Indian corporations. All fifty companies that comprise the Nifty Index were selected as sample for the study. The 50 Nifty companies selected guaranteed assurance of those firms with highest performance with sufficient disclosures regarding best practice recommendations of corporate governance. The set of panel data involves of 250 observations which include time series data from 2015 to 2019 and cross-section units of 50 sample firms for all variables. Then, the selected underlying sample was categorized into two major industry (i.e. manufacturing and service) and four sub industry-wise groups (i.e. industrial production, information technology, financial services and manufacturing) to capture industry wise differences in corporate governance characteristics and to facilitate analysis, comparison and interpretation.

Model Specification

The present study used multiple regression models to analyze association between variables of corporate governance and firm performance. As the study is based on panel data, the OLS estimation will be biased. So, the following LSDV (Least Squares Dummy Variable) panel data regression model was used employing both firm and time dummies for preliminary analysis of relationship between corporate governance mechanisms and firm performance:

$$PERF\ it = \alpha 0 + \beta_1 NDIRit + ß2\ B_l NDit + ß_3 OSTRit + ß_4 COMit + ß_5 STRit + ß_6 RUMit + \gamma \vec{X}\ it + tt + di + \varepsilon it$$

Where firm signify by 'i' and't' represent the periods, respectively, di is the firm-specific effect, tt is time effect and εit is the error term. The Xit variables are vector of control variables. This specification allows for a firm specific fixed effect di, time effects that are common to firms captured by year dummies (tt), and a random unobserved component εit. In the model, α_0 = intercept, BIND= board independence, NDIR = Number of Directors, OSTR= ownership structure as a proxy for shareholder rights, COM = committees, CSTR= Capital Structure, RUM= Executive Remuneration, and. $\beta 1 \ldots . \beta 6$ are the beta coefficients of the regression model. The dependent variable PERF is firm performance represented by Tobin's Q and Market to Book value ratio. Tobin's Q is a measure of value creation over total assets whereas M/B ratio measures value creation over book value of paid-up capital from equity investors. The explanatory variables in the model are internal mechanisms of corporate governance and are widely used in corporate governance studies as proxy for corporate governance. For instance, higher proportion of independent directors on the board implies greater board independence which results in better corporate governance. Similarly, the other explanatory variables board size, ownership structure, board committees, capital structure, and director remuneration are indicators of soundness of corporate governance in a firm. The control variables used are firm size, age, and market performance. Wald, Breusch-Pagan and Hausman tests were used to determine the proper model specification among pooled ordinary least square

(OLS), fixed effects, and random effects panel data models. In addition to the panel data models, the study also employed 2SLS to investigate the endogeneity issue between corporate governance and performance.

As number of previous studies have noted, the relationship between corporate governance and company performance is subject to endogeneity, or reverse causality. Specifically, prior empirical evidence reveals possibility of existence of bi-directional relationship between corporate governance and performance. To account for this endogeneity, the study used a four-equation system to allow for governance, performance, ownership, and capital structure to be potentially endogenous. The study estimated this system of equations using Two-Stage Least Square (2SLS). As the number of instrument variables used for the estimation is greater than the number of endogenous variables, the system is over-identified. The 2SLS is the appropriate method for estimation of such over-identified models. The study specifies the following four-equation system of equations based on Bhagat and Bolton (2008) [6].

Firm Performance = f_1 (Governance, Ownership, Capital Structure, Z_1, ε_1)

Corporate Governance = f_2 (Performance, Ownership, Capital Structure, Z_2, ε_2)

Ownership Structure= f_3 (Performance, Governance, Capital Structure, Z_3, ε_3)

Capital Structure = f_4 (Performance, Governance, Ownership, Z_4, ε_4)

Where, the Z_i's are vectors of exogenous variables influencing the dependent variables and the εi's are the error terms associated with unobservable features of managerial behavior or ability that explain cross-sectional variation in performance, governance, ownership and capital structure. The Z_1 vector comprises of variables board size, firm size, market performance, and firm age. The Z_2 vector comprises of variables board size, director independence, and remuneration. Similarly, the Z_3 vector comprises of variables board size, firm size, and operating performance. Finally, the Z_4 vector comprises of variables board size, firm age and industry dummy. The system of structural equations comprises of four endogenous variables and eight exogenous variables. The total number of variables in Z_i vectors excluded in each of the equations being checked for identification is larger than G-1 (where G is total endogenous variables in the system). Hence, all the four structural equations are over-identified and they meet exclusion restrictions required for fulfilling the order condition.

The econometric approach used in the study for analyzing the simultaneous equations involves three steps. First, estimation of the system of equations using OLS and 2SLS. Second, checking the validity of the instruments used in 2SLS using the Stock and Yogo (2004) test for weak instruments. Third, employing the Hausman (1978) specification test to determine which estimation technique is most appropriate. The Hausman test for endogeneity is used to specifically test for differences between the OLS and 2SLS estimates. The test statistic normalizes the differences in coefficients by the differences in standard errors. Large differences between OLS and 2SLS will result in large test statistics and low p values, suggesting that endogeneity is a problem and that the 2SLS results are more consistent than OLS results. While this test is sometimes called a test for endogeneity, it technically evaluates whether or not endogeneity has any effect on the consistency of the estimates. If the instruments are valid, this test is used to suggest which estimation method should be used.

Measurement of Variables

The review of extant literature on relationship between corporate governance and firm performance reveals that the concept corporate governance is generally measured or operationalized by two categories of indicators, viz., corporate governance mechanisms and corporate governance index (Love, 2010) [17]. Corporate governance is reflected in several different mechanisms that make it possible for the management to run a corporation for the benefit of one or more stakeholders (Morck, 2007). Mechanisms of corporate governance can be divided in two basic groups: internal and external. External mechanisms include: legal framework, influence of the market, and competition and protection of minority ownership rights. Internal mechanisms most often include: board size, board independence, board diversity, board committees, director remuneration, ownership structure, financial leverage, and relationship with stakeholders and transparency in the current financial operations and reporting (Lipton & Lorsch, 1992) [19]. Each of these mechanisms is, in a different way, significant for the control of the management's work and good implementation and application of corporate governance principles. Internal and external mechanisms are foundations for determining the index for measuring the quality of corporate governance and have relationship with corporate performance. To be effective, a governance mechanism must narrow the gap between the interests of manager and investors, and have a significant and positive impact on corporate performance and value (Denis & Kruse, 2001) [12].

Table 1: *Operationalization of Variables*

Variable	Abbreviation	Operational Definition
Dependent Variables		
Market to Book Value Ratio	M/B Ratio	The ratio of market capitalization of equity to book value of equity.
Tobin's Q	Tobin' Q	The ratio of market value to replacement value of total assets measured as the market value of equity plus the book value of debt divided by the book value of total
Independent Variables		Assets.
Board Independence	BIND	Percentage of independent directors on the board.
Number of Directors	NDIR	Total number of board of directors.
Board Committees	BCOM	Total number of board level committees.
Remuneration	RUM	Natural logarithm of total annual compensation paid to board of directors.
Promoter Shareholding	OWN	Percentage of equity share ownership by promoter
Endogenous Variables		Shareholders.
Return on Assets	ROA	Ratio of net income to total assets.

Leverage	LEV	Leverage is capital structure measure calculated as the long-term debt-to- total assets ratio.
Ownership Structure	OSTR	Cumulative percentage of equity shareholding by ten largest shareholders used as measure of ownership concentration.
Corporate Governance	CGINDEX	Corporate governance index computed from equally
Exogenous Variables		Weighted 21 items related to CG best practices.
Firm Size	LNTA	Natural logarithm of total assets of the firm.
Firm Age	AGE	Years of operation of the firm.
Market Performance	MKTR	The market return measured by annual percentage change in Nifty 50 index.
Operating Performance	EBIT/TA	Operating profit divided by total assets.
Industry Dummy	IDUM	Industry dummy taking value of '1' for service and '0' for manufacturing.

(C.*, July 2016)

Results

Output of Panel Data Model

The study employs panel data least square dummy variable model incorporating firm and time effects. The outputs of the model are given in Table 2 and Table 3. Table 2 presents the output of the regression models in which Tobin's Q a measure of financial performance is used as the dependent variable.

Table 2: Relationship between Firm Performances as Measured by Tobin's Q and Corporate Governance Mechanisms

Variables	Model I	Model II	Model III	Model IV	Model V	Model VI	Model VII
Constant	1.289	0.927	-1.330	-2.231	3.992	0.762	2.913*
	(1.395)	(1.569)	(3.116)	(4.578)	(34.386)	(1.098)	(0.939)
Board	0.09*	0.014	0.007	0.028	-0.064	0.026*	-0.010
Independence	(0.004)	(0.013)	(0.021)	(0.033)	(0.065)	(0.011)	(0.007)
Number of Directors	-0.007	0.059	-0.098	0.344***	-0.285	-0.126**	-0.147**
	(0.075)	(0.082)	(0.186)	(0.207)	(0.854)	(0.058)	(0.059)
Board	0.094	0.137***	0.071	0.062	0.460	0.103	0.203*
Committees	(0.069)	(0.091)	(0.116)	(0.296)	(0.825)	(0.068)	(0.042)
Remuneration	0.003	0.003	0.011***	0.002	0.005	0.004*	0.008***
	(0.02)	(0.005)	(0.007)	(0.005)	(0.011)	(0.002)	(0.004)
Promoter	-0.024*	-0.048*	-0.039**	-0.051	-0.074	-0.098*	-0.046*
Shareholding	(0.022)	(0.017)	(0.017)	(0.039)	(0.234)	(0.015)	(0.008)
Leverage	-0.375**	-2.204*	0.011	-2.698**	-9.637	-1.426*	-0.022
	(0.146)	(0.476)	(0.141)	(1.375)	(21.237)	(0.343)	(0.47)
R^2	0.333	0.235	0.468	0.296	0.697	0.538	0.545
Adjusted R^2	0.188	0.157	0.244	0.179	0.475	0.424	0.376
F-Statistics	1.867*	1.086*	2.108*	0.566*	3.007*	6.711*	3.757*

Model I consist observation of all Nifty companies. Model II and III are based on observations of manufacturing and service sector while models IV, V, VI and VII are based on manufacturing industries, IT, industrial production and other observations of financial.

", ** & *** means the variable is significant at 1%, 5%, and 10% level of significance respectively. The first value is beta coefficient. The values in parentheses are standard errors".*

Model-I uses the data of all sample firms. In the model, the variables board independence, promoter shareholding, and leverage are significant variables while board size, number of board committees, and directors' remuneration have been found to be insignificant in explaining firm performance. The beta coefficient of independent director variable is 0.09 and it is significant, implying firms with higher number of independent directors on board yield better performance. The variable, promoter shareholding is also significant with negative beta, meaning higher share ownership of promoters' results in lower financial performance. Leverage has negative beta co-efficient of -0.375 which is significant at five percent level of significance. Hence, higher leverage lowers the performance. (C.*, July 2016)

Similarly, Model – II explains the data of manufacturing firms. In the model, number of board committees, promoter's shareholding, and leverage are found to be significantly affecting firm's TOBIN'S Q while independent directors, board size, and director's remuneration are found to be insignificant. The beta co-efficient of number of board committee is positive and is significant at 10% level of significance. It means higher number of board committees leads to better firm's performance. Promoter's shareholding has beta co-efficient of -0.048 and is significant at one percent level of significance which reveals that higher promoter's shareholding results in weaker performance. Leverage has negative statistical relationship with TOBIN'S Q, significant at one percent means an increase in leverage of manufacturing firms lowers down the performance of the firm. (C.*, July 2016)

In Model- III, the variables director's remuneration and promoter's shareholding have significant relationship with dependent variable TOBIN'S Q. Director's remuneration has positive beta co-efficient of 0.011 and is significant at 10 percent level of significance. Hence, an increase in remuneration improves firm's TOBIN'S Q. Similarly, results reveal that higher promoter's shareholding can result in to lower TOBIN'S Q. Model – IV gives output of model for financial service firms. In the model, variables board size, board committees, director's remuneration, and promoter's shareholding have significant relationship with TOBIN'S Q. In Model –V, all independent variables have insignificant relationship with dependent variable TOBIN'S Q. In Model - VI, the data of various industrial production firms exhibit that only one variable, board committees has insignificant relation with TOBIN'S Q. Finally, in Model VII variables board size and leverage have significant

relationship with TOBIN'S Q while variables board independence, board committee, directors' remuneration, and promoters' share-holding are insignificant. In all models, the firm and time effects are significant indicating presence of sector-wise and industry-wise differences in effect of corporate governance variables with firm performance. (C.*, July 2016)

Table 3 below presents the output of regression models in which M/B Ratio a measure of financial performance is used as the dependent variable. In Model - I, the variables board independence and director remuneration are significant variables while board size, number of board committees, promoter's shareholding, and leverage are found to be insignificant in explaining firm performance. There exists positive and statistically significant relationship between board independence and M/B Ratio. It means firms with higher number of independent directors on board have higher value. Director remuneration is significant and has positive relationship with M/B Ratio. It means increase in compensation for board of directors contributes for better financial performance.

Similarly, Model - II explains the data of manufacturing firms. In the model, only independent variable i.e. directors remuneration has significant relationship with M/B ratio. Director's remuneration is significant and has positive relationship with M/B Ratio, which means an increase in director's remuneration leads to better financial performance.

In Model - III, the variables board independence and director's remuneration only have significant relationship with M/B ratio. From the results we can infer that an increase in number of independent directors tends to improve M/B Ratio of service sector firms. Similarly, an increase in remuneration of directors serving in service sector can affect firm profitability positively. Model – IV explains data of financial service providing firms. In the model, variables board committees and director remuneration have positive relationship while increase in promoter shareholding is found to be negatively associated with M/B ratio. In Model -V, the data of various IT firms reveal that none of the independent variables has significant relationship with M/B Ratio. Similarly, Model - VI reveals that increase in director remuneration affects firm value positively. On the contrary, higher shareholding by promoters is found to affect value negatively. Finally, in Model VII only the variables board independence and directors remuneration are found to have significant positive relationship with M/B ratio. In all models significant firm and time effects are observed which reveals that the effect of corporate governance on firm performance is different across (C.*, July 2016) industry and sector.

Table 3: Relationship between Firm Performance as Measured by M/B Ratio and Corporate Governance

Variable	Model-I	Model-II	Model-III	Model-IV	Model-V	Model-VI	Model-VII
Constant	0.584	0.944	-0.4967	2.768***	5.020	-0.320	-2.632
	(1.391)	(1.692)	(3.128)	(1.639)	(33.655)	(0.583)	(5.217)
Board Independence	0.026***	0.017	0.048**	-0.004	-0.061	0.002	0.062*
	(0.011)	(0.014)	(0.021)	(0.013)	(0.063)	(0.006)	(0.022)
Board Size	0.044	0.060	-0.057	-0.120	-0.324	0.012	0.275
	(0.074)	(0.086)	(0.186)	(0.104)	(0.836)	(0.032)	(0.234)
Board Committees	-0.014	-0.062	0.132	0.156**	0.432	0.038	0.176
	(0.069)	(0.094)	(0.117)	(0.073)	(0.808)	(0.036)	(0.337)
Remuneration	0.005**	0.004**	0.011***	0.017**	0.007	0.003*	0.008**
	(0.003)	(0.003)	(0.007)	(0.007)	(0.012)	(0.002)	(0.003)
Promoter Shareholding	0.012	-0.012	-0.014	-0.040*	0.068	-0.018**	-0.039
	(0.013)	(0.017)	(0.017)	(0.014)	(0.985)	(0.009)	(0.044)
Leverage	-0.096.	-0.374	0.038	0.043	-10.130	0.236	0.017
	(0.146)	(0.502)	(0.142)	(0.083)	(20.786)	(0.182)	(1.565)
R2	0.424	0.534	0.724	0.702	0.701	0.429	0.288
Adjusted R2	0.348	0.422	0.476	0.485	0.655	0.383	0.183
F-Statistics	4.145*	4.699*	4.136*	12.978*	3.220*	10.743*	11.476*

Model I consist observation of all Nifty companies. Model II and III are based on observations of manufacturing and service sector while models IV, V, VI and VII are based on observations of financial, IT, industrial production and other manufacturing industries respectively.

, ** & * means the variable is significant at 1%, 5%, and 10% level of significance respectively.*

The first value is beta coefficient. The values in parentheses are standard errors.

Based on the joint analysis of the output of different regression models discussed above various generalizations can be inferred. Among different independent variables measuring corporate governance characteristics, director remuneration was found to be most important factor affecting performance followed by promoter shareholding, board independence, board committees, and board size respectively. The results show that director remuneration has positive impact on firm performance while promoter shareholding has negative relationship with performance. Similarly, number of committees and number of independent directors are found to have positive relationship with performance while board size affects performance negatively. The results indicate that corporate governance has higher impact on performance on service sector firms as compared to manufacturing sector firms. Director remuneration is found to be important corporate governance variable for service sector firms and number of committees for manufacturing sector. Presence of independent directors was found to be relatively more important for manufacturing sector. (C.*, July 2016) In addition, smaller board size seems to have positive impact on performance of service sector firms.

2SLS Model Output

Table 4 presents the output of the 2SLS equation models used for estimation of endogenous relationship between firm

performance and corporate governance. The Stock and Yogo test indicates that the instruments used are appropriate. The F-statistics for each of the three endogenous regressors in the simultaneous equations exceeds the critical value and hence the instruments are deemed to be valid. The Hausman specification test is performed on each system to determine which estimation method is most appropriate. The result of the test reveals that 2SLS estimation is appropriate than OLS for the estimation. Hence, Table 4 presents the estimation results of 2SLS only. In Model A, ROA, measure of financial performance, is the endogenous variable in this first equation of the simultaneous equation model. As a measure of corporate governance, an index of corporate governance is created using summated score of different corporate governance characteristics as explained in methodology section. The coefficients of governance (GOV) and capital structure (LEV) are significant at one and five percent respectively. The coefficient of governance is positive. It indicates that firms with sound corporate governance practices have better financial performance. (C.*, July 2016) The coefficient of capital structure or leverage reveals that it has positive relationship with performance measured by ROA.

Model-B presents the output of 2SLS regression model using governance as the dependent endogenous variable. Performance, ownership, size, and market value are significant variables. ROA is positively related to governance. It indicates that firms with good performance seem to have better governance practices adopted. The sign of ownership variable is negative, indicating higher proportion of ownership by promoter group results in inferior corporate governance practices. It supports the principal-principal conflict that exists in most countries with ownership concentration. Model - C presents the output of the structural equation model using ownership as the dependent variable. The variables ROA, leverage, total asset, and market capitalization are significant variables. The governance variable is found to be insignificant. It indicates that ownership doesn't depend on governance. Finally, Model-D provides the output of the final simultaneous equation model taking leverage as the dependent endogenous variable. The CGINDEX indicator of corporate governance is not significant. It means governance practices adopted by a firm don't impact its capital structure decision. The variables ROA and promoter shareholding are significant at one percent level of significance. The ROA has positive beta coefficient supporting the fact that profitable companies have high debt level. The coefficient of ownership variable is negative indicating firms with ownership concentration in hands of promoters employ lower financial leverage.

Table 4 *Output of two-stage Least Squares (2SLS) Model The specifications of the structural equations estimated are given below:* $PERF = \alpha + \beta 1 OWN + \beta 2 GOV + \beta 3 LEV + \beta 4$NDIR$+ \beta 5(TA) + \beta 6 MKTR + \beta 7 AGE + \epsilon 1$ $GOV = \alpha + \beta 1 OWN + \beta 2 PERF + \beta 3 LEV + \beta 4$ NDIR $+ \beta 5 IND + \beta 6 RUM + + \epsilon 2$ $OWN = \alpha + \beta 1 PERF + \beta 2 GOV + \beta 3 LEV + \beta 4$ NDIR $+ \beta 5(TA) + \beta 6 EBIT/TA + \epsilon 3$ $LEV = \alpha + \beta 1 OWN + \beta 2 GOV + \beta 3 PERF + \beta 4$ NDIR $+ \beta 5 AGE + \beta 6 IDUM + \epsilon 4$

	Model - A	Model - B	Model - C	Model - D
Constant	254.159*	82.344*	26.044	17.758
	(56.325)	(21.66)	(10.22)	(2.59)
OWN	2.066	-1.793*		-1.284*
	(1.968)	(0.082)		(0.063)
GOV	87.255*		-3.758	-2.165
	24.305)		(3.984)	(1.375)
LEV	34.264**	-0.355	-13.438*	
	(16.087)	(0.285)	(2.68)	
PERF		0.266*	-0.652*	-0.359*
		(0.069)	(0.038)	(0.016)
NDIR	12.395	0.098**	2.872	0.829
	(8.635)	(0.027)	(1.53)	(0.537)
LN(TA)	0.194***		-1.154**	
	(0.105)		(0.528)	
MKTR	0.784* (0.242)			
AGE	3.509			2.636*
	(2.349)			(0.482)
IND		1.783*** (1.025)		
RUM		3.573 (2.885)		
EBIT/TA			0.843 (0.615)	
IDUM				-0.308* (0.085)
Adjusted R^2	0.613	0.655	0.548	0.648
F-statistic	11.224*	12.953*	9.299*	8.319*
Hausman Specification Test (OLS Vs. 2SLS):				
h-Stat 73.325*		76.285*	51.376*	49.649**

Table 4: (*cont.*)

Model – A	Model- B	Model-C	Model-D
Stock and Yogo Weak Instruments Test			
First-Stage F-stats (For			
Endogenous vars) 38.5, 138.8, 69.5	53.7, 88.4, 72.7	52.9, 124.5, 59.2	53.3, 136.4, 67.4
Critical Value (5%) 9.54	9.54	9.54	9.54

*, ** & *** *means the variable is significant at 1%, 5%, and 10% level of significance respectively. The first value is beta coefficient. The values in parentheses are standard errors. The endogenous variables are performance (PERF) measured by ROA, governance (GOV) measured by CG index, ownership structure (OWN), and capital structure (LEV). The exogenous variables are Number of Directors (NDIR), natural logarithm of total assets (LN(TA)), market return (MKTR), firm age (AGE), director independence (IND), director remuneration (RUM), operating profit to total assets (EBIT/TA), and industry dummy (IDUM).*
(C.*, July 2016)

The results of 2SLS model reveal the existence of endogeneity in performance and governance. The findings show that firms adopting sound governance mechanism have better performance. Hence, financial performance of a firm is influenced by governance practices adopted by the firm. The governance is found to depend on performance and ownership structure. Hence, the study detects bidirectional relationship between corporate governance and performance. Furthermore, it has been found that stock ownership concentration in promoters hand leads to weaker governance practices.

Conclusion

The present study empirically examines and investigates the relationship between corporate governance and firm performance in context of an emerging country India which is characterized by ownership concentration in form of promoter and family shareholding, and low level of investor protection. In corroboration to previous studies (bhagat & Bolton, 2008) [6]; Gompers *et al*., 2003; (Leora & Inessa, 2004), the study establish a positive association between corporate governance and financial performance of the firm. It means, it suggests that Indian companies should adopt corporate governance as best practices for improvement in both financial performance and market value. The structure of corporate governance like board independence, number of board committees and director remuneration are found to affect performance positively whereas board size, promoter shareholding and leverage have negative effect on the performance of the firm.

Implications and Future Research Directions

The consequences of the present study have important implications for researchers, directors of companies, and public policy makers engaged in corporate governance in emerging economies. The findings reveal that the companies who follow with good corporate governance practices can expect to achieve higher financial performance and reduced agency costs. So, policy makers may be able to contribute to effective functioning of the economy by supporting optimal corporate governance practices which requires implementation of corporate governance reforms in line with real sector and financial sector reforms. The result of the study suggests that for improving the corporate governance standards, the policy makers should have to concentrate on increasing Board independence and restricting concentration of owner. Furthermore, the codes and regulation of Corporate Governance should emphasize on larger board committee, small board size and director compensation package that links their interests to long-term value intensification of the firm.

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