OWNERSHIP STRUCTURE AND FIRM PERFORMANCE: AN EMPIRICAL STUDY OF SELECT COMPANIES IN THE PRIVATE SECTOR OF INDIA

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ABSTRACT

This paper attempts to examine the impact of ownership structure on firm performance. The sample is based on BSE 200 Index companies and the study spans over a period of 15 years, from 2001 to 2015. It considers four major groups of ownership viz., Indian Promoters (IP), Foreign Promoters (FP), Non-Promoter Institutions (NPI), and Non-Promoter Non-Institutions (NPNI) and three measures of performance namely, return on asset (ROA), return on equity (ROE), and Tobin's Q ratio (TQ). Panel data regression results shed light on the relation between ownership structure and firm performance.

Keywords: Corporate Governance, Ownership Structure, Firm Performance, Panel Data Regression

INTRODUCTION

The relationship between corporate ownership structure, corporate governance and performance has been an important and on-going discourse and produced debate in the literature of corporate governance and finance during last two decades. It has received considerable attention of academicians, researchers, regulatory bodies, policy makers and government because of two reasons – one is liberalization, globalization and privatization leading to integration of financial markets of economies and the other is surge of high profile corporate scandals and debacles that took place around the world in last two decades. The success of any business firm mainly depends upon the good corporate governance. Effective corporate governance mechanisms include both internal mechanisms such as ownership structure, board of directors and its major committees and external mechanisms such as hostile takeover bids, legal protection of minority shareholders and disciplining the managers in the external labour market. Corporate governance reforms in India have mainly focused on internal governance mechanisms. The ownership structure is one of the key internal governance mechanisms widely considered to mitigate governance problems of firms. Corporate ownership structure has two dimensions, one is concentration or diffuseness of ownership and the other is identity or category of ownership, both of these have important implications for corporate governance. Though there are variation in corporate governance structures and systems across countries, the existing literature has remained largely confined to the United States and Europe, where the governance systems are quite different from those found in India and other emerging economies. However, studies capturing the dynamics of relationship between ownership structure and firm performance in India are very few. Against this backdrop, the present study aims to examine the impact of ownership structure, as a corporate governance mechanism, on the performance of Indian companies.

LITERATURE REVIEW

Extensive empirical literature exists on the association between ownership structure and firm performance. The direct relationship between ownership concentration and firm performance has long been established (Berle & Means, 1932; Demsetz & Villalonga, 2001; Ganguli & Agarwal, 2009). Other studies revealed an absence of relation between the two (Karaca & Eksi, 2012; Tsegba & Herbert, 2011). In contrary, the inverse relationship between the two has been suggested by Belkhir (2004); Hu & Izumida (2008); Haniffa & Hudaib (2006) etc.

Empirical findings also revealed a positive relationship between foreign ownership and firm performance Xu, Zhu & Lin (2005), Uwuigbe & Olusanmi (2012), etc. Again, Malik (2015), Tsegba & Herbert (2011) have not found any significant association between these two variables.

Many studies found a positive relationship between

institutional ownership and firm performance (Irina & Nadezhda, 2009; Liang, Lin & Huang, 2011; Douma, George & Kabir, 2006). On the contrary, Mizuno & Shimizu (2015), Mura (2007), Dwivedi & Jain (2005) found that institutional ownership is negatively associated with firm performance.

A perusal of the review of literature reveals that there has been increasing empirical evidence on the effects of ownership structure and firm performance in developed markets, but little attention has been given to emerging markets such as India to examine the impact of ownership structure on company's performance. This study, therefore, proposes to bridge this gap.

Objective of the Study

The objective of the study is to examine the impact of ownership structure as a corporate governance mechanism on the performance of select private sector non-finance listed companies in India.

RESEARCH METHODOLOGY

The study is based on the companies listed in the BSE 200 Index as on 10th January, 2016. For the analysis, all public sector companies, banking and finance companies, and the companies which were not listed for all the fifteen years under consideration have been excluded from the sample. Finally, the number of companies was further reduced due to non-availability of complete data for the period under study. These sample selection criteria resulted in a final sample size of 61 companies. The firm level panel data for the study has been compiled from the corporate database Capitaline Plus. The present study covers a period of 15 years from 2000–01 to 2014–15.

Key Variables

To examine the impact of ownership structure on corporate performance in India, the following variables have been considered:

Measurement of Corporate Performance (Dependent Variable): Three measures of performance, as supported in the finance and accounting literature are chosen for analysis.

Return on assets (ROA): The accounting variable chosen is calculated as the ratio of operating income (EBIT) to total assets. Total assets include value of fixed assets, investments, and current assets.

Return on equity (ROE): ROE has been used as the accounting based measure of firm performance. [ROE = PBDITA/Shareholders' Equity]

Tobin's Q (TQ): Tobin's Q has been used as a market based measure of performance. TQ is computed as [Market Value of common stock + Book Value of preference stock + Book Value of borrowings + Book Value of Current Liabilities / Book Value of total assets] with all values computed at the year end.

Ownership Variables (Independent Variables): The present study is based on relevant data available from the mandatory disclosure requirements under Clause 35 and 40A of the Listing Agreement of SEBI. It considers four major groups of equity ownership which are **Indian Promoters (IP); Foreign Promoters (FP); Non-Promoter Institutions (NPI) and Non-Promoter Non-Institutions (NPNI)**. Again, this study considers two ownership variables namely **Total Promoters (TP)** shareholding and **Total Non-Promoters (TNP)** shareholding for representing concentrated ownership and diffused ownership respectively. Ownership is measured as a percentage of shares held by the respective category of owner related to the total outstanding shares of the firm.

Control Variables: The control variables used in the study have been selected with reference to those employed in earlier studies which are Age, Size and Leverage.

Age: Age is defined as the number of years between the observation year and the firm's incorporation year.

Size: Firm Size is measured using natural logarithm of total assets for each year.

Leverage: Debt-Equity Ratio [Total Debt/Total Equity] has been considered as proxy for firm's financial leverage.

Tools for Analyses: The present study uses panel data analysis because the data of selected variables consists of 89 firms for a period of 15 years. Panel data analysis is a method used to estimate the economic relationship with cross section series which has time dimension. The methodology adopted is justified because it allows overcoming the unobservable, constant and heterogeneous characteristics of individual firms and also the potential endogeneity (to some extent) between dependent and independent variables. There are two panel data regression models (fixed effects model and random effects model) having different assumption for error term. Hausman specification test is conducted to choose between fixed and random effects model and thereafter the suitable regression analysis is employed and interpreted for the purpose. The multivariate

$$y_{it} = \beta_0 + \beta_1 IP_{it} + \beta_2 FP_{it} + \beta_3 NPI_{it} + \beta_4 NPNI_{it} + \beta_5 Age_{it} + \beta_6 Size_{it} + \beta_7 Leverage_{it} + e_{it}$$

In which, y is the firm performance, i.e., ROA, ROE and Tobin's Q (TQ). β_0 is the constant term, β_1, β_2, β_3, β_4, β_5 β_6 and β_7 are the parameters of the explanatory variables. IP, FP, NPI and NPNI are ownership variables and Age, Size and Leverage are control variables. e_{it} represents the composite error term and i and t denotes the number of firms and years respectively. Microsoft Excel has been used for arranging the data and statistical package programme STATA (Version 9.2) has been employed for econometric analysis.

RESULTS

Summary statistics of all the variables employed in the empirical analysis are displayed in Table 1. The table indicates the mean, standard deviation, minimum and maximum values of variables for 1335 firm year observations.

Table 1: Summary Statistics (N= 1335)

Variable	Mean	Std. Deviation	Min	Max
ROA	0.253	0.229	- 0.500	2.222
ROE	24.58	20.836	-15.1	231.48
TQ	4.256	5.168	0.144	50.630
IP	37.606	25.389	0	96.09
FP	11.840	21.724	0	75
NPI	25.970	13.681	0	77.6
NPNI	23.184	13.644	1.64	97.42
TP	49.446	18.73	0	96.09
TNP	49.154	17.71	3.92	101.14
Age	43.067	25.25	2	118
Size	3.381	0.603	1.324	5.591
LEV	0.648	0.968	0	8.56

The analysis of mean value clearly depicts that the stake of Indian Promoters (IP) was high (37.61%) during the study period. It means that on an average, the sample companies in India were dominated by Indian Promoter holdings and their stake. While the average foreign promoter (FP) holdings was just 11.84% during the study period, the average holdings of non-promoter institution (NPI) was at 25.97% and the share of non-promoter non-institutions (NPNI) was 23.18%. Again, since Indian Promoters' stake as a single category of owner is the maximum (37.61%), the study posits that ownership of Indian companies is moderately concentrated in the hands of Indian Promoters.

Table 2: Pairwise Correlation Matrix (N = 1335)

	IP	FP	NPI	NPNI	AGE	SIZE	LEV
IP	1.0000						
FP	**-0.6942**	1.0000					
NPI	-0.4215	-0.0914	1.0000				
NPNI	-0.2890	-0.1730	-0.1602	1.0000			
AGE	-0.3913	0.2147	0.2989	0.0737	1.0000		
SIZE	-0.1602	0.0128	0.4852	-0.2963	0.3441	1.0000	
LEV	0.1713	-0.2581	-0.1474	0.2591	-0.1373	-0.0916	1.0000

Pair wise correlations are reported in Table 2. Pair wise correlations among the explanatory variables can serve as a warning regarding multicollinearity and against simultaneous inclusion of heavily correlated independent variables in the same regression. The highest pair wise correlation is that between Indian Promoter (IP) and Foreign Promoter (FP) at 0.6942, so problems arising from multi collinearity are not envisaged.

Partial Correlation

Table 3 below presents the Pearson Correlation Coefficient between independent variables and dependent variables. It shows that all four independent variables namely, IP, FP, NPI and NPNI have significant positive correlation with each of the three dependent variables viz., ROA, ROE and TQ.

Table 3: Partial correlation matrix (N = 1335) with ROA

	ROA	ROE	TQ
IP	0.120*** (0.000)	0.120*** (0.000)	0.104*** (0.000)
FP	0.176*** (0.000)	0.149*** (0.000)	0.161*** (0.000)
NPI	0.103*** (0.000)	0.084*** (0.002)	0.078*** (0.004)
NPNI	0.120*** (0.000)	0.097*** (0.000)	0.080*** (0.004)
Age	-0.042 (0.125)	-0.075*** (0.006)	-0.016 (0.558)
Size	0.086*** (0.002)	0.099*** (0.000)	0.118*** (0.000)
LEV	-0.242*** (0.000)	-0.0828*** (0.003)	-0.201*** (0.000)

*** (1% significance level), ** (5% significance level), Figures in brackets are p values

Regression Analysis

To decide whether fixed effects model is suitable or random effects model is more suitable, Hausman specification test has been conducted. The result of Hausman test is depicted below:

Table 4: Hausman Test (for ownership identity)

Model with Dependent Variable	Chi-Square Statistics	Degree of Freedom	p- value (Prob >Chi 2)
ROA (model 1 & 7)	24.43	7	0.0010
ROA (model 4 & 10)	15.62	4	0.0036
ROE (model 2 & 8)	23.41	7	0.0014
ROE (model 5 & 11)	7.34	4	0.1190
TQ (model 3 & 9)	73.30	7	0.0000
TQ (model 6 & 12)	6.43	4	0.1691

The results of Hausman test show that Chi-Square statistics is significant ($p < 5\%$) in all the models meaning that the null hypothesis (random effect is appropriate) stands rejected. Therefore, the fixed effects panel regression is now employed to estimate the impact of ownership structure on firm performance.

Impact of Ownership Identity on Firm Performance

This section analyses the impact of identity of ownership on the performance of firm.

Table 5: Results of Fixed Effects Panel Regression

Variables	Model 1 ROA	Model 2 ROA	Model 3 ROE	Model 4 ROE	Model 5 TQ	Model 6 TQ
IP	0.364 (0.114)	0.364 (0.112)	0.447** (0.045)	0.526** (0.018)	0.091* (0.082)	0.070 (0.166)
FP	0.463** (0.045)	0.422** (0.066)	0.501** (0.025)	0.556** (0.013)	0.155*** (0.003)	0.112** (0.028)
NPI	0.606*** (0.008)	0.478** (0.037)	0.538** (0.016)	0.548 ** (0.014)	0.147*** (0.005)	0.111 ** (0.029)
NPNI	0.334 (0.137)	0.334 (0.136)	0.391* (0.072)	0.423 * (0.052)	0.047 (0.362)	0.081 * (0.102)
AGE		-0.553** (0.011)		-0.797 *** (0.000)		0.345 *** (0.000)
SIZE		8.001 *** (0.003)		10.360 *** (0.000)		-1.55 ** (0.010)
LEV		-3.607 *** (0.000)		0.423 (0.571)		-0.159 (0.350)
Constant	-17.33826 (0.435)	-14.422 (0.526)	-21.22115 (0.323)	-26.827 (0.225)	-5.9114 (0.241)	-13.954 *** (0.006)
F-test	F(4,1242) = 6.95 Prob > F = 0.0000	F(7,1239) = 8.28 Prob > F = 0.0000	F(4,1242) = 2.81 Prob > F = 0.0243	F(7,1239) = 4.09 Prob > F = 0.0002	F(4,1242) =19.80 Prob > F = 0.0000	F(7,1239) = 25.89 Prob > F = 0.0000
R-sq: within between overall	0.0219 0.0993 0.0632	0.0447 0.0023 0.0047	0.0090 0.0674 0.0370	0.0226 0.0078 0.0057	0.0600 0.1932 0.1337	0.1276 0.0130 0.0138
Number of groups	89	89	89	89	89	89
N =	1335	1335	1335	1335	1335	1335

The results of fixed effect panel regressions are exhibited in table 4. In Model 1, the relationship between ownership structure (each for IP, FP, NPI and NPNI) were first tested as independent variable and firm performance ROA as dependent variable. Three variables (Age, Size and Leverage) were then entered as control variables in Model 2 to check the consistency of the regression coefficients of the main independent variables.

The result shows that only two ownership variables namely FP and NPI have statistically significant positive relation with the performance variable ROA in Model 1. The same statistically significant positive

relationship between ownership and performance still holds even after controlling for three variables namely age size and leverage in Model 2.

Using the same approach, the effects of ownership structure on firm performance as measured by ROE was tested in Model 3 and Model 4. Results show that all the ownership variables have significant positive impact on firm performance in both the models. In the same vein, the effect of ownership structure on firm performance as measured by Tobin's Q (TQ) was tested in Model 5 and Model 6. Results show that IP, FP and NPI have a significant positive effect on TQ. However, NPNI did not show any significant relation with firm performance as measured by TQ in Model 5, but when the control variables were included in the regression equation in Model 6; the result detected a positive significant impact of NPNI on TQ, though it failed to detect any significant impact of IP on TQ. The results also show that leverage has a significant negative effect on performance measured by ROA but it has no effect on ROE and TQ while size has a significant positive effect on ROA and ROE but significant negative effect on TQ. Again firm age has a significant negative effect on ROA and ROE but significant positive effect on TQ. Overall, the results of Fixed Effect Panel Regression analyses indicate that only two ownership variables namely FP and NPI have a consistently significant effect on both market-based performance measure (Tobin's Q ratio) and accounting based performance

measure (ROA and ROE).

Impact of Ownership Concentration on Firm Performance

Before estimating the regression equation to examine the impact of ownership concentration on firm performance, Hausman Specification Test is employed for deciding the suitable panel data regression model, the result of which is shown below:

Table 6: Hausman Test (for ownership concentration)

Model with Dependent Variable	Chi-Square Statistics	Degree of Freedom	*p*- value (Prob >Chi 2)
ROA (model 13)	16.13	4	**0.0028**
ROA (model 16)	15.17	4	**0.0044**
ROE (model 14)	22.21	4	**0.0002**
ROE (model 17)	21.38	4	**0.0003**
TQ (model 15)	68.18	4	**0.0000**
TQ (model 18)	71.96	4	**0.0000**

Since the Hausman test decides in favour of fixed effects regression, the same is estimated to examine the impact of ownership concentration on firm performance. To avoid multicollinearity problem (because TP and TNP together constitutes the total shareholding of a firm i.e. TP+TNP =100%), two separate regression equations have been designed. The result of fixed effects panel regression model is exhibited in table 8 below.

Table 7: Results of Fixed Effect Panel Regression with TP and TNP

Variables	Model 7 ROA	Model 8 ROE	Model 9 TQ	Model 10 ROA	Model 11 ROE	Model 12 TQ
TP	-0.0143(0.807)	0.0598(0.292)	- 0.009 (0.497)			
TNP				0.039 (0.500)	- 0.026 (0.638)	0.0146 (0.252)
AGE	-0.530** (0.014)	- 0.777*** (0.000)	0.347*** (0.000)	- 0.507** (0.019)	- 0.744*** (0.000)	0.353*** (0.000)
SIZE	9.392*** (0.000)	11.433*** (0.000)	-1.157** (0.046)	9.191*** (0.000)	11.119*** (0.000)	-1.202** (0.037)
LEV	-3.956 *** (0.000)	0.0970 (0.895)	-0.235 (0.162)	- 3.917*** (0.000)	0.1354 (0.854)	- 0.225 (0.181)
Constant	19.676*** (0.000)	16.360*** (0.001)	-6.206*** (0.000)	16.691*** (0.004)	20.212*** (0.000)	-7.454*** (0.000)
F-test	F(4,1242) = 12.64 Prob > F = 0.0000	F(4,1242) = 5.22 Prob > F = 0.0000	F(4,1242) =41.87 Prob > F = 0.0000	F(4,1242) = 12.75 Prob>F = 0.0000	F(4,1242) = 4.99 Prob > F = 0.0005	F(4,1242) = 42.11 Prob>F = 0.0000
Rsq:within between overall	0.0391 0.0000 0.0009	0.0165 0.0052 0.0037	0.1188 0.0054 0.0074	0.0394 0.0000 0.0009	0.0158 0.0039 0.0029	0.1194 0.0050 0.0070
Number of groups	89	89	89	89	89	89
N =	1335	1335	1335	1335	1335	1335

The results of Fixed Effect Panel Regression are exhibited in Table 8. In Model 7, 8 and 9 the relationship between ownership concentration (TP) is first tested as main independent variable along with three variables (Age, Size and Leverage) as control variables and firm performance ROA, ROE and TQ as dependent variable. Similarly, in Model 10, 11 and 12 the relationship between ownership diffuseness (TNP) is first tested as main independent variable along with three control variables (Age, Size and Leverage) and firm performance ROA, ROE and TQ as dependent variable. The results show that none of the ownership variables namely TP and TNP have statistically significant relation with any of the performance variables namely ROA, ROE and TQ. The results are consistent across all models and hence robust.

CONCLUSION

The study has examined empirically the relationship between the ownership structure and firm performance using a balanced panel of 89 companies included in the BSE 200 Index for the period from 2001 to 2015 totalling 1335 firm-year observations. The result documents that unobserved firm heterogeneity explains a large fraction of cross-sectional variation in firm performance that exists among Indian firms. From the results obtained the study concludes that there is a significant positive relation between ownership held by Foreign Promoters and Non Promoter Institutions. However, the study found no significant impact of ownership held by Indian Promoters and Non-Promoter Non-Institutions on firm performance. Furthermore, it appears that the concentration of ownership structure does matter with respect to firm performance. In other words, concentrated or diffused shareholding of a company has no impact on its performance. Overall, the major findings of this study are that shareholding by foreign promoters and institutional investors has a significant impact on performance whereas the ownership concentration does not have a significant impact on performance.

RECOMMENDATION

- The result of the study implies that increase in foreign promoters' shareholding and institutional ownership will lead to increase in firm performance and hence it is recommended to enhance the shareholding of foreign promoters and non-promoter institutions to enable companies to attract managerial and technical expertise and to ensure efficient monitoring crucial to enhance financial performance.
- The investors, policymakers and stakeholders are to be educated about the relationship between ownership

structure and performance of the firms.
- The investors may take appropriate decision on the portfolio, after considering this information.

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

The following are the limitations of the study:

1. This study focused only on 89 companies of BSE 200 index.

2. The study considered the private sector non-financial companies only. Public sector, banking and financial companies have been excluded.

3. The study used three measures of sampled companies' profitability. There are other forms of measures that can also be used as proxy for companies' profitability.

4. Only three control variables have been considered.

The following issues have been felt to be explored further and hence been suggested for future research:

1. Future studies may further explore performance in relationship to other corporate governance specific variables (e.g. Board Size, Board Composition and CEO duality etc.)

2. Given the diversity of empirical works, clearly additional research is needed considering a larger sample size, including more control variables and in other developing economies also.

3. The study can be conducted to find out possible relationship between family ownership and corporate performance.

4. Further research can also include unlisted companies in the sample and compare the results between listed and unlisted companies.

5. Future research may investigate the ownership-performance relationship in respect of banking and finance companies.

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