Empirical Evidence of Corporate Governance Disclosures and Board Size Modular with Financial Performance in select IT Companies in India

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Abstract

This paper investigates the relationship and impact of board size and corporate governance disclosures of selected listed Indian IT companies on their financial performance using data for five companies over a single period of 2014 to 2015. Using structure equation modelling, the study demonstrates the extent to which board size and disclosures help explain the financial performance of the selected companies. The main findings show that there's a significant relationship between independent variables i.e. board size and disclosures, and dependent variables i.e. return on assets and capital employed. Thus, board size has an inverse relationship with the returns whereas corporate governance disclosures have a positive relationship with returns. Hence, a larger board size will negatively affect the returns and higher corporate governance disclosures will lead to increase in returns. This paper has also discovered that different companies have their own different attitudes and approaches to disclosures with respect to their corporate governance practice.

Keywords – *Board of Directors, Financial Performance, Corporate Governance Disclosure, Board Size, Returns JEL – G340, G380*

A. Introduction

A number of previous studies show that a firm's performance is influenced by various characteristics such as the firm's size, board of directors, governance, its profitability and returns, etc. Since board size has an impact on the firm's performance, previous studies have been strongly criticized for not sufficiently controlling for endogeneity problems (Wintoki, Linck, & Jeffry, 2010). Endogeneity problems can be described as the correlation between the board size and other factors affecting a firm's performance. In this paper, apart from board size, corporate governance disclosures have also been taken as a variable to eradicate endogeneity problems to an extent. The two most significant functions of board of directors are advising and monitoring ((Raheja, 2005), (Adams & Ferreira, 2007)). The advisory function relates to offering expert advice to the CEO and access to critical information and resources. The function of monitoring the management helps eliminate flawed management practices so as to carry on business activities efficiently by safeguarding the interests of all the stakeholders in a legitimate and ethical manner.

The present study focuses on the relationship between corporate governance disclosures and board size with respect to profitability of listed Information Technology companies in India. India is a major global player in the IT business with a number of large Indian IT companies significantly contributing to economic development. The guideline taken into consideration for the study is SEBI clause 49 (2014), which has incorporated the material and contradictory changes brought under the Companies' Act 2013. This study aims to quantify the contribution of corporate governance to the performance of selected listed companies in India. Literature review and previous empirical studies from overseas have been studied to develop a research framework and research hypotheses with respect to the relationship between corporate governance and a firm's performance. As per the previous studies, the present paper involves two parameters of corporate governance which can be measured through the following elements: board size and corporate governance disclosures. In addition, a firm's performance is measured by the return on assets and capital employed, known as the ROA & ROCE ratio.

B. Significance of the study

This research paper helps to assess the extent to which selected listed IT companies are following SEBI guidelines on corporate governance; whether there is any relationship between corporate governance disclosures and returns. There is a duality regarding conception in the past literature, where some claim that board size has a positive relationship with the firm's returns while others state that there is a negative relationship or no relationship with returns (Wintoki, Linck, & Jeffry, 2010). Past studies have stated that corporate governance disclosures have a significant impact on financial performance of companies ((Hassan, 2012), (Fauzi & Locke, 2012)). A few years ago, stakeholders only used financial tools to ascertain the financial performance of companies; however, today, they also study corporate governance reports of companies to acquaint themselves with knowledge of corporate ethics and governance practices followed by companies. Today, corporate governance disclosures are imperative to help stakeholders make decisions with respect to the company. SEBI has very strict rules regarding board size and composition of board of directors. SEBI has tried to improve the qualitative aspects of companies' boards; however, to issue efficient guidelines for each and every company is not possible. On the other hand, it is not possible for every company to benefit by following all the SEBI guidelines. Many of the past research studies have indicated that there's a negative relationship between board size and return on assets and capital employed (VO & Phan, 2013). This paper brings out the causal relationship between board size and the firm's returns. Corporate governance practices and financial performance of companies are complementary and intertwined with each other.

C. Findings of Previous Studies

No.	Researcher	Samples	CG Measures	Remarks / Results
1	(Fauzi & Locke, 2012)	79 firms	Board size, Board Committee and Ownership structure with ROA	Significant
2	(Connelly, Limpaphayoma, & Nagarajan, 2008)	CG index of Family owned firms	CGI with ROCE	Positive
3	(Black, Jang, & Kim, 2006)	515 companies	CG rating and Tobin's Q	Positive
4	(Paul, Ebelechukwu, & Yakubu, 2015)	23 Microfinance banks	Board size with ROA	Not Significant
5	(Kajananthan, 2012)	11 banking companies	Board committee, Board size, Board meeting with ROA	Positive Significant
6	(Hassan, 2012)	Governance reporting indices of 95 corporations	Disclosure	Significant
7	(Byun, Lee, & Park, 2012)	590 companies	BOD, Disclosure with ROE	Positive
8	(Patel & Dallas, 2002)	859 firms	CGS and Tobin's Q	Positive Significant
9	(Agarwal & Knoeber, 1996)	500 Firms	Independent Directors & Tobin's Q	Negative
			Dependent Directors & Tobin's Q	Positive
10	(Wintoki, Linck, & Jeffry, 2010)	Generalized Method of Moments (GMM) estimator of 5000 firms	Board Structure with Firm performance	No Correlation
11	(Enya, Miller, & Yang, 2011)	51 Public and 130 Private Insurance Companies	Board size, Board Structure and Tobin's Q	Positive Significant
12	(Bhagat & Black, 2002)	Large American Public Companies	Outside Directors and Tobin's Q	Not Significant
13	(Bhagat & Bolton, 2008)	GIF and BCF Indices	Board size and ROA	Positive Significant
14	(Hermalin & Weisbach, 1988)	142 firms	Hiring of outside director after firms' Poor returns	Positive
			Firing of inside director after firms' poor returns	Positive

No.	Researcher	Samples	CG Measures	Remarks / Results
15	(VO & Phan, 2013)	77 firms	Board size with ROA	Negative
16	(Haque, 2015)	Interview of stakeholders	CGI and Equity Capital	Positive Significant
17	(Atanasova, 2016)	All companies listed on the Canadian junior stock exchange	Corporate Governance and Capital Structure	Significant
18	(Shahwan, 2015)	86 firms listed on the Egyptian Exchange	CGI and Financial Performance	Insignificant

D. Research Objectives

The purpose of the study was to examine the significant and causal relationship of corporate governance disclosures and board size with financial returns of selected listed IT companies.

E. Research Hypotheses

H01	The parameters i.e. board size and disclosures are truly equal in the population.
H02	There is no significant impact of board size on return on assets and return on capital employed of selected listed IT companies.
H03	There is no significant impact of corporate governance disclosures on return on assets and return on capital employed of selected listed IT companies.

F. Research Methodology

To achieve the research objectives of the present study in examining the relationship and impact of corporate governance disclosures and board size on corporate performance using return on assets and return on capital employed of selected listed companies as performance measurement metrics, the following methodology has been applied:

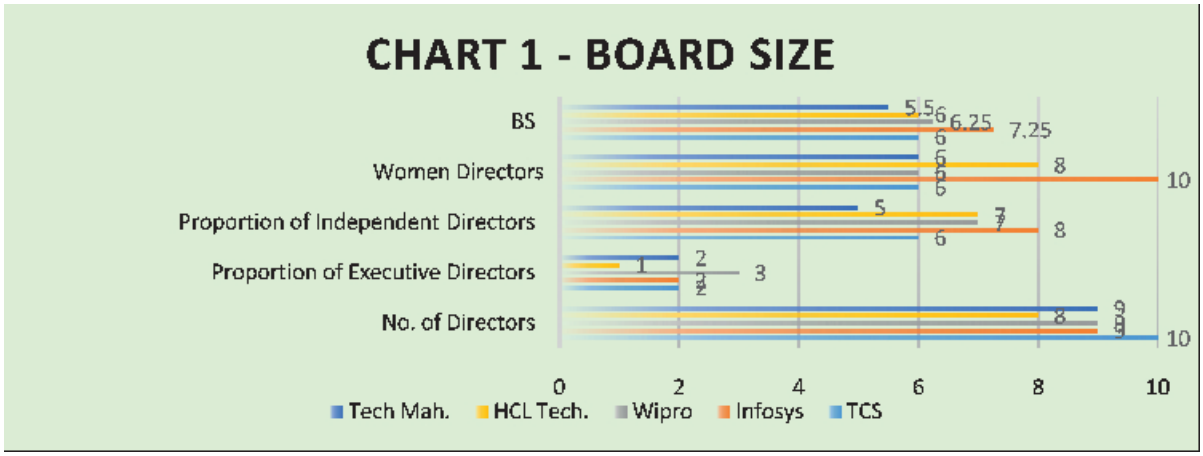
- **Data collection and study period:**
  The research paper undertakes the study of the top 5 Information Technology MNCs based in India, on the basis of their net worth. The selected MNCs are TCS, Infosys, Wipro, HCL Technologies and Tech Mahindra. The data for the study has been gathered from the annual reports of the selected MNCs for the period of 2014 to 2015.

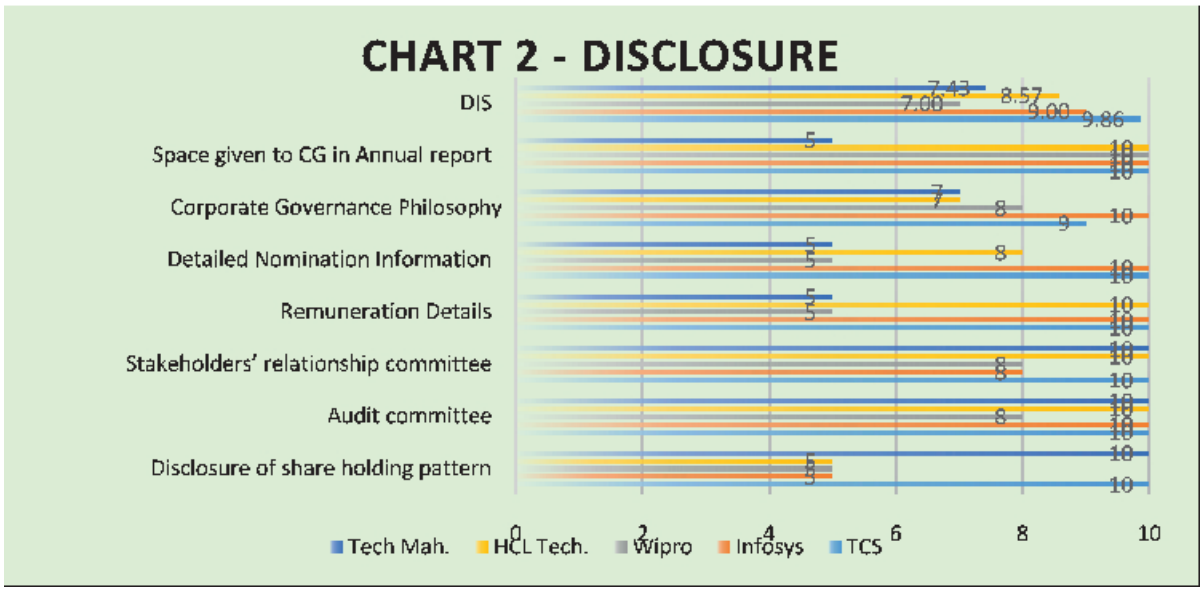
- **Design and techniques:**
  The research is both exploratory and descriptive in nature. Statistical techniques applied in the present study are path analysis and structural equation modelling – SEM (Amos 21).

- **Measurement of variables:**
  The dependent variables are the selected companies' financial performance, measured by ROA and ROCE. Return on assets and capital employed are accounting-based performance measures and are included for robustness. The explanatory variables are the board size and corporate governance disclosures, which have been extracted from the various 11 sub-variables summed up under the respective broad explanatory variables heads.

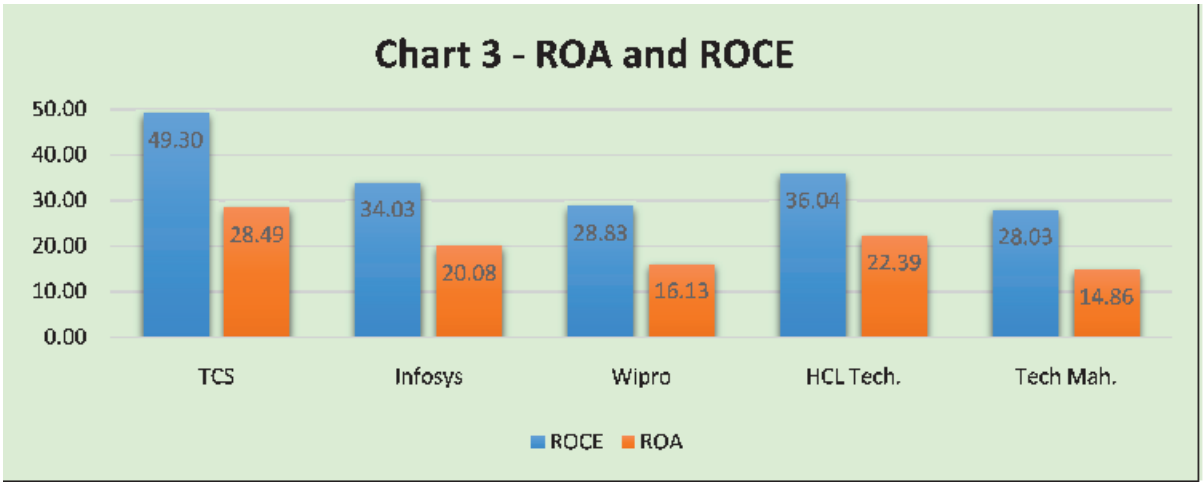
Variables	Charts	Definitions	Measurements
Dependent Variables			
ROA	(*Chart 3)*	Return on Assets	$ROA = \frac{\text{Profit after Tax}}{Total\ Average\ Assets}$
ROCE	(*Chart 3)*	Return on Capital Employed	$ROCE = \frac{\text{Earnings Before Interest and Tax}}{Capital\ Employed}$
Explanatory Variables			
BS	(*Chart 1)*	Board Size	The weighting in the construction of index is at the scale of 10, based on subjective judgments. *(For easy and clear understanding, the Score has been depicted with the help of charts in the paper)*
DIS	(*Chart 2)*	CG Disclosure	

The explanatory variables further consist of various sub-variables. BS and DIS[1] are averages of their own sub-variables. The sub-variables of board size are Women Directors, Proportion of Independent Directors, Proportion of Executive Directors and Number of Directors. The sub-variables of Corporate Governance Disclosures are Space given to CG[2] in Annual Reports; Corporate Governance Philosophy; Detailed Nomination Information; Remuneration Details; Stakeholders' Relationship Committee; Audit committee and Disclosure of Shareholding Pattern.





[1] *Board Size and Corporate Governance Disclosures*
[2] *Corporate Governance*



G. Result and Analyses

Figure 1: Standardized Estimates

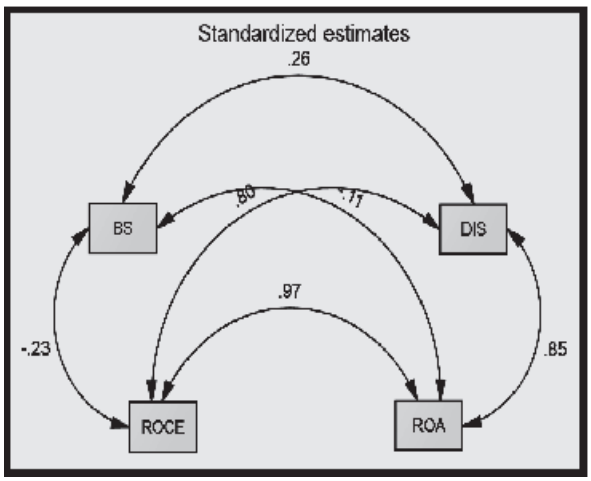


Figure 2: Unstandardized Estimates

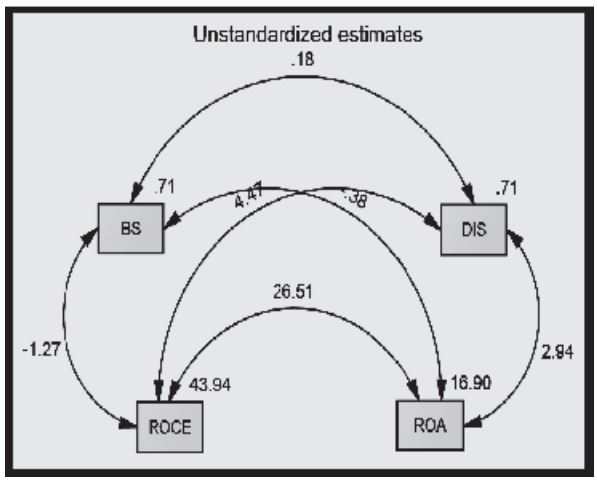


Figure 1 depicts the implied correlation estimates among the said variables - board size (BS), discourse (DIS), return on capital employed (ROCE) and return on assets (ROA). DIS has a positive and significant relationship with ROA and ROCE at 10% level of significance. On the contrary, BS has a negative relationship with ROA and ROCE.

Figure 2 depicts the variances and covariance among the variables. The variances for the variable BS and DIS have been considered equal from the beginning by labelling them with same constraints; this can be seen in Figure 2 where variances of BS and DIS are equal. The covariance of board size (BS) with return on assets (ROA) and return on capital employed (ROCE) is negative which indicates that the return and board size move slightly inverse whereas covariance of disclosure (DIS) with ROA and ROCE moves positively.

Table 2: Sample Covariance

	ROA	ROCE	BS	DIS
ROA	23.687			
ROCE	36.608	58.572		
BS	.263	.097	.335	
DIS	4.664	7.184	.183	1.084

Tables 2 and 3 describe the sample covariance and implied covariance respectively. Here, sample covariance is the identified model and implied covariance is the over-identified (reduced) model in which variances of BS and DIS have been labelled with same constraint. The covariance for board size (BS) and disclosure (DIS) is the same in the sample and implied covariance table at 0.183, which indicates that the parameters (BS and DIS) required to have equal estimates are really equal in the population. From here, this has been taken as the same for the rest of the study.

Table 3: Implied Covariance

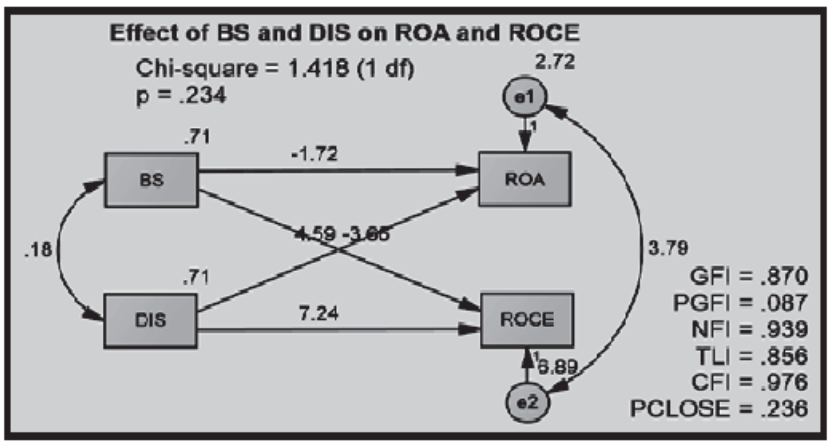
	ROA	ROCE	BS	DIS
ROA	16.899			
ROCE	26.511	43.944		
BS	-.382	-1.275	.710	
DIS	2.944	4.470	.183	.710

The chi-square 1.418, which is less than three, also explains that the difference between the parameter and estimates is not significant. The above statistics indicate that board size and disclosure are truly equal in the population. So it can be said that the chi-square value (1.418) is a single observation on a random variable that has an approximate chi-square distribution with one degree of freedom. The probability is about 0.234 that such an observation would be as large as 1.418. Consequently, the evidence against the null hypothesis is not significant at the 0.05 level.

Results of Structural Equation Modelling

The chi-square of the model is 1.418, which is not significant and represents the goodness of model fit. Many authors are of the view that if the sample size is small and degree of freedom is very low i.e. 1, then model fit testing should be avoided because it will produce an unfavourable model fit result. But the present study has undertaken the goodness of model fit testing also and information like GFI, PGFI, NFI, TLI, CFI represent the said model as good model fit where RMSEA represents an unfavourable figure. Ramsey needs to be less than 0.05 and p-close to be more than 0.05 for a good fit model, but due to the small sample size and very low degree of freedom, Ramsey will not give favourable results. Hence, by reviewing all other fitting indices including chi-square, the goodness of model fit can be inferred as a fit model which has the ability to consistently reproduce the data.

Figure 3: Unstandardized Estimates - Effect of BS and DIS on ROA and ROCE



Note: GFI = Goodness-of-Fit Index; PGFI = Parsimony Goodness-of-Fit-Index; NFI = Normed Fit Index; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; RMSEA = root mean square error of approximation; PCLOSE = p of close fit.

Figure 3 and Table 3 display the unstandardized regression coefficient weights or path loadings of predictors (BS & DIS) on outcomes (ROA & ROCE). Disclosures have a positive significant impact on ROA and ROCE at less than 1% level of significance, where board size shows a negative significant impact on ROA and ROCE at 10% level of significance. B (or b) generally refers to the unstandardized coefficient, i.e. the regression coefficient is measured in the original measurement units.

Figure 3 and Table 4 portray that when disclosure (DIS) goes up by one point score, then ROA and ROCE go up by 4.59% and 7.24% respectively, with a standard error of 1.014 and 1.613 respectively; on the other hand, when board size (BS) goes up by one point score, then ROA and ROCE go down by 1.72% and 3.66% respectively, with a standard error of 1.01 and 1.61 respectively.

Table 4: Unstandardized Regression Weights

Default Model			Estimate (B)	S.E.	C.R.	P
ROCE	<---	BS	-3.662	1.613	-2.271	.023
ROA	<---	DIS	4.592	1.014	4.530	***
ROA	<---	BS	-1.721	1.014	-1.698	.089
ROCE	<---	DIS	7.243	1.613	4.491	***

**** less than 1 percent level of significance*

Table 5: Standardized regression weights

Default Model			Estimate (β)
ROCE	< ---	BS	- .465
ROA	< ---	DIS	.941
ROA	< ---	BS	- .353
ROCE	< ---	DIS	.920

Table 4 and Figure 4 show the standardised coefficient of the variable. Under standardised regression weight, β makes it easier to compare different predictors to see which is more important. The β in the table refers to the number of standard deviation changes we would expect in the outcome variable for a 1 standard deviation change in the predictor variable. Here, β represents that -0.465 and -0.353 of standard deviation changes inversely would be expected in ROCE and ROA (outcome variables) for every 1 standard deviation change in the board size (predictor variable). On the other side, 0.941 and 0.920 of standard deviation changes would be expected in ROA and ROCE (outcome variables) for every 1 standard deviation change in the corporate governance disclosures (predictor variable).

Figure 4: Standardized Estimates - Effect of BS and DIS on ROA and ROCE

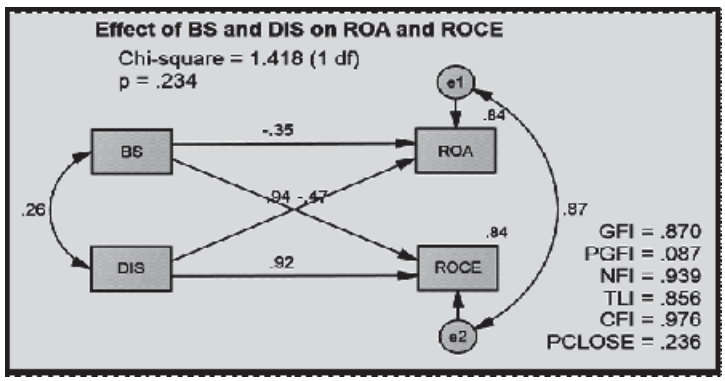


Figure 4 displays the squared multiple correlation (R2) as 0.84 which shows a very significant contribution of independent variables i.e. BS & DIS on dependent variables i.e. ROA & ROCE. The prediction power of independent variables for dependent variables of the listed companies is very good. But this high R2 may be due to a small sample size of affluent IT companies where all the selected companies mandatorily follow the same corporate governance practices prescribed by SEBI.

No.	Hypotheses	Results	
H01	The parameters i.e. board size and disclosure are truly equal in the population.	Accepted	Equal
H02	There is no significant impact of board size on return on assets and return on capital employed of selected listed IT companies.	Rejected	Negative significant
H03	There is no significant impact of corporate governance disclosure on return on assets and return on capital employed of selected listed IT companies.	Rejected	Positive significant

H. Theoretical Interpretation

The above analyses describe that explanatory variables i.e. corporate governance disclosures and board size have a significant relationship with dependent variables i.e. return on assets and return on capital employed (financial performance measures) of selected listed Indian IT companies. Corporate governance disclosures show a positive impact on ROA and ROCE at 1 percent level of significance, which indicates that companies disclosing more information and specific details with respect to corporate governance practices, maintain a good financial performance; it also helps them to sustain financial strengthens for the long term and create goodwill ahead of other companies in the industry. Two examples of companies which have been able to achieve this are TCS and Infosys.

The board size shows a negative relationship with ROA and ROCE at 10 percent level of significance, which indicates that as the board size increases, the financial performance (ROA and ROCE) of the selected companies, declines. This implies that an optimum board size (neither too small nor too large) should be maintained. With the increase in size of the board, the power of decision-making and strategy lies in the hands of several directors which, in turn, results in delay in implementation since different directors will advocate different strategies. SEBI has mandated some norms regarding the constituent of board - having at least one woman director on the board and at least one-third of directors need to be independent directors. These norms are mandated by SEBI to safeguard the interests of all stakeholders and sustain their faith in the company's governance. The study also reveals the role of executive directors; those are the key personnel who devote their time to fulfil their responsibilities towards the company and have a better knowledge of the company's activities, management and growth prospects. The involvement of independent directors on the board ensures that executive directors should carry on the business and maximise the wealth of all the stakeholders ethically and legally irrespective of whether they make any personal gain.

I. Conclusion

The present study enunciates that (independent variable) board size and corporate governance disclosures have a significant impact on (dependent variable) return on assets and return on capital employed of selected IT companies. More precisely, corporate governance disclosures indicate a positive significance with return on assets and capital employed whereas board size indicates a negative significance with returns. Almost all the selected companies follow mandatory and various non-mandatory provisions which have been laid down by regulatory bodies like SEBI, but all these companies have a different approach and attitude towards corporate governance practices. The board size displays an inverse relationship with dependent variables, return on assets and capital employed which prompts companies to have an optimum board size rather than just increasing the number of directors in the board. A good proportion of executive directors are also indispensably significant for the effective operations of the company as they are full-time directors who remain focussed on the affairs of the company. To keep check on the independency of executive directors, a proportionate number of independent directors are required on the board.

J. Limitations of the Study

The sample size and time period of the study are relatively small; some caution would be needed before generalizing the results to the entire population. The results drawn from the analysis cannot hold true for the IT Industry. Secondly, the construction of corporate governance index is subjective in nature, which cannot be taken as an exact figure.

K. Scope for Further Research

Corporate governance is an important subject which has attracted the attention of many researchers and corporates. The present study's limitations are sample size and period; however, it provides a scope for further study by incorporating a larger sample size and time frame. Corporate governance norms are constantly updated in order to achieve effective governance practice. Future studies could incorporate other components and more CG variables to assess the impact of corporate governance on financial performance of a specific industry.

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