



Corporate Governance and Firm Value: An Empirical Study on Manufacturing Companies Listed On Pakistan Stock Exchange

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ABSTRACT

Purpose: This study aimed to contribute to the existing literature in the field by determining influence of corporate governance measures on firm value in the context of Pakistan.

Methodology: The proxies used for corporate governance measures were as follows: presence of executive, non-executive and independent directors; board size; presence of audit committee and presence of human resource and remuneration committee. On the other hand, the proxies for firm value were as follows: MVA and EVA. A sample of 125 manufacturing firms listed on Pakistan Stock Exchange (PSX) was selected based on their market capitalization and availability of data. Data was obtained for the period 2011-2017 from audited financial reports of selected firms published on PSX and relevant companies' websites. Multiple regression analysis was performed to obtain the results.

Findings: This study supports the fact that EVA can be a dependable measure in terms of value maximization goal. Firms can escalate this figure by employing the CCG mechanism. Moreover, this study also established a strong association among the CCG variables and MVA as per the findings.

1. INTRODUCTION

Corporate governance is becoming a vital component of today's business world. Its growing importance has compelled a vast number of researchers and academicians to research and study the various aspects of this ongoing debate.

This term has been defined in many different ways in different studies. As defined by La Porta et al. (2000), "Corporate governance is to a certain extent a set of mechanisms through which outside investors protect themselves against expropriation by the insiders."

This definition has been given in the context of investor protection. The findings of the study also affirm the role of corporate governance mechanisms as a solution for the agency issue.

A few definitions state the corporate governance as those practices, procedures and systems which lead towards attaining the organizational goal i.e. shareholder's wealth maximization. But some researchers have argued that shareholder's wealth maximization should not be attained at the cost of other stakeholders. Studies have proven that more profitable businesses are those which are concerned with the interests of all related parties, particularly employees and customers. Therefore, an addition to the previous statement can be the attainment of owners' goal along with the protection of interests of all stakeholders (Agyemang et al., 2014). Hence we can say that corporate governance is a framework of rules, policies and procedures that secures the concerns of all the stakeholders of the firm.

It has been vastly researched that conflict of interest between the owners and managers of the firm led to the need of a system which would protect the owners' investment and focus the management attention on achieving the organizational objectives rather than pursuing their own interests. So the agency issue originated the need for - rather became a requisite for - developing such mechanism.

Corporate governance became a crucial problem after facing scandals of numerous large corporations such as WorldCom and Enron. It was at that time when the subject became a global debate. Although, the need to develop corporate governance structures and practices was felt a long time ago; since the conflict of interest existed between management and ownership of a firm. The shareholders, being the owners of the firm, are large in number and require an ample return on their equity investment, whereas the management, being fewer in number, is more interested in making money for their own pockets. Shleifer and Vishny (1997) defined the term simply as the ways by which suppliers of finance (shareholders) assure themselves of earning a return on their investment. The goal of owners is wealth maximization that can be achieved by increasing the firm's value whereas the management is interested in obtaining personal benefits at the cost of firm owners. The owners want the management to make such decisions which give them huge earnings. But why would managers want to earn huge profits for the owners? This results in the emergence of agency theories which were devised and practiced to control this agency issue.

In order to achieve the goal of wealth maximization, owners must ensure sound management practices, system and procedures so that the firm's goal is met. We can say that corporation is a system that is run by both owners and managers which ultimately have an influence on the financial performance of a firm. The decisions, practices and procedures of board of directors and management play crucial role in the performance of a firm. That is why; the subject gained utmost attention in the last few years. Another reason of its growing importance is that the corporate governance is both a national and international level dilemma. Most of the business organizations run their operations globally. This global association creates a need to address this issue at domestic level as well as international level.

The need of the hour is to find out whether these practices have improved the firms' financial performance; moreover, the goal of the firm has been achieved i.e. whether the firm value has increased by practicing this code of business conduct or not.

Many companies are still not following the Code of Corporate Governance. Thus, it is required to affirm the effectiveness of Code of Corporate Governance in terms of the attainment of firm's goal of value addition and better financial performance. Therefore, this study makes an attempt to explore the relationship among these governance practices, financial performance and firm value. If a positive relationship is evidenced then it can be suggested to implement these practices.

This study would contribute to the existing literature in the field by determining influence of governance measures on firm value in the context of Pakistan. It will take into account companies from manufacturing sectors of PSX. Moreover, EVA and MVA have not been related with corporate governance measures in Pakistan until now.

The focus of this research is to discover the impact of these practices on the firm value. The objectives of this study are as follows:

- ❖ Determine the relationship between firms' value and implementation of corporate governance practices
- ❖ Investigate the direction of impact being positive or negative (if any) that implementation of corporate governance practices possesses on firms' value
- ❖ Trace the magnitude/strength of impact that implementation of corporate governance practices possesses on firms' value

The study provides valuable insight about the management perspective of the companies considered in the CCG. The policy makers can use the findings of this study to devise better strategies regarding CCG mechanism. It not only highlights those features of CCG that are contributing towards firms' sustainability, but also, those aspects that still need to be considered in CCG are also discussed in this study. It is helpful in determining the outcome of implementation of CCG measured by financial indicators. This study is restricted in terms of its sample which includes only manufacturing listed companies on PSX. The research may be further applied onto non-manufacturing listed firms. Moreover, the time-period may be expanded to the recent time in order to analyze the current scenario.

2. LITERATURE REVIEW

2.1 Mechanisms of Corporate Governance and Firm Value

Corporate governance is not just a law; rather, it is moral duty of all the stakeholders of a corporation to cooperate with each other for the welfare of all. It cannot be solely implemented by legislation (Cohen et al., 2008; Basheer et al., 2018; bin Hidthiir et al., 2019). Hence, the management should create a supportive culture for its implementation and achieve desired outcomes (Lubatkin et al., 2005; Basheer 2014). Galbreath (2006) posit that stakeholder management can be achieved through corporate governance mechanism. The stakeholder management leads to gaining competitive advantage and better performance in the long run (Barney, 1991; Jones, 1995; Basheer et al., 2019). The Code of Corporate Governance (CCG) covers different aspects of stakeholder management. This research draws its conclusion based on four measures of corporate governance. These are board composition, board size, audit committee and Human Resource & Remuneration (HR&R) committee. Board composition, as explained in the Code of Corporate Governance 2012, means that there must a balance of executive and non-executive directors including independent directors and those representing minority interests. Board size refers to the total number of members of Board. Audit committee is required to monitor and evaluate the financial reports of firm. For this purpose, there is an internal audit committee as well as external auditors who work in collaboration to ascertain that reporting standards are met. A human resource & remuneration committee is required to perform the responsibilities for recruiting, training, compensating and firing the workforce on fair basis.

Vast number of studies explains the firms' goal of value addition in which the firm value is measured by the Market Value Added (MVA) and Economic Value Added (EVA) (Lehn & Makhija, 1996; Charreaux & Desbrieres, 2001; Coles et al., 2001; Tudway & Pascal, 2006;

Bayrakdaroglu et al., 2012). EVA is defined as the difference between operating profits and cost of capital. It is not only a measuring tool for firm value, but also acts as determinant for a comprehensive analysis of management strategies, policies and procedures (Mouritsen, 1998). It is also suggested by Nur'ainy et al. (2013) to implement corporate governance mechanisms because this increases EVA which is the ultimate goal of an investor. Therefore, an investor should invest in those firms that follow the code of corporate governance. On the other hand, MVA is calculated as the difference between market value of invested capital and its book value. It is referred to as the present value of capital invested. It is capable of determining the efficiency of management in terms of resource utilization. MVA is preferred over accounting measures of performance for several reasons: accounting measures can be manipulated; are short-term in nature; are based on historical data; are not effective for measuring efficiency of intangible resources (Barney, 1991; Prahalad, 1994; Hillman & Keim, 2001)

2.1.1 Board Composition, Firm Value

Board composition is considered to be a vital part in the governance practices as Lipton and Lorsch (1992); Brown and Caylor (2004) declared the board composition to be the key element among all the corporate governance measures.

A common approach towards having independent directors on board is supported with the argument that they serve as effective monitors. A study conducted in the context of China by Hu et al. (2014) support the assertion of having independent directors; as it can improve reporting quality. They devise better internal control techniques. Their monitoring capability, particularly, plays an effective role in improving internal control. This has a significant positive impact on financial reporting and performance of the firm. The authors highlighted a few dimensions to effectively engage the independent directors in firm. They concluded that the independent directors – if appropriately compensated – contribute well in the affairs and enhance firm value. They assumed that the independent directors have an internal pressure to perform well since they want to have a noble reputation in the labor market. The independent directors should have expertise to pinpoint the weaknesses in control system. Therefore, it was suggested to increase the number of independent directors on board because it also improves the corporate governance. Elshandidy and Hassanein (2014) studied the impact of board of directors' independence on the accounting discretion of UK firms. They proved that more independent boards practice conservative accounting which improves reporting quality; hence, enhancing the firm value. On the other hand, the counter argument is that the independent directors are not well-aware of the business activities and lack industrial know-how; therefore, they are poor decision makers. Abidin et al. (2009) analyzed the relationship between board structure and firm value for Malaysian firms using VAIC (Value Added Intellectual Coefficient) as a proxy for value addition based on intellectual and physical resources of firms. A significant positive relationship was found between the proportion of independent directors and value added to the firm. There are other researchers who could not find any significant relation between performance indicators and presence of outside directors (Yermack, 1996; Haniffa & Hudaib, 2006).

2.1.2 Board Size and Firm Value

Board size is another important aspect of board structure. Size of the board refers to the total members of board including all executives, non-executives and independent directors. Studies provide conflicting findings regarding the size of board and its impact on firm performance. These studies vary in their approach towards analyzing the relationship between board size and firm performance. Researchers consider different factors such as countries, institutional

culture, industry and market characteristics, etc. which produce inconsistent findings for this relationship.

Ghosh (2009) ascertained for Indian firms that board size is negatively related with firm performance. Large boards are inefficient monitors because of free-rider problems (Lipton and Lorsch, 1992). According to Cho and Rui (2009), board size and firm value are negatively related to each other. In another study, conducted in the context of Singapore and Malaysia by Mak and Kusunadi (2005), board size and firm value were found to be inversely related. They also mentioned that the “one” board size is not suitable for all types and sizes of firms. The corporate governance mechanisms affect the firm value in a different manner for different firms. It was further argued that large boards are less effective in terms of decision making and cost because firms have to pay more remuneration to directors; moreover, large boards have tendency to add more directors instead of replacing the existing ones. Ntim et al. (2015) examined the association between board size and firm value for South African firms respectively. The study provides interesting empirical evidence about the role of boards in an emerging market. The results indicate that the large boards are effective in such markets and have positive association with firm value (Ho & Williams, 2003; Abidin et al., 2009). The boards engage in activities like securing business contracts, contacts, other critical resources such as finance, information and the like. Study also revealed the fact that these large boards include more non-executive and independent directors than executive or inside directors. The study also criticized the previous findings of researchers (Yermack, 1996; Guest, 2009) who convinced others to believe that larger boards have problems of decision-making and communication so they are unproductive.

2.1.3 Audit Committee and Firm Value

Code of Corporate Governance (CCG) requires the formation of an audit committee. Auditor’s responsibilities lie in evaluating the financial reports of a firm and rectifying any errors found thereby. Better the audit quality – lower would be the probability of biased or erroneous reports; hence, improving the transparency and disclosures which would certainly enhance firm value.

A study conducted by Rogers (2006) revealed that disclosures and transparency have a significant impact on financial performance of firm. It was concluded that an increased level of trust can have positive impact on the firm performance. The trustworthiness of a firm can be influenced by its disclosures and transparency procedures; therefore, a firm should focus on improving both disclosure and transparency practices. Chan and Li (2008) related firm value with audit committee and provided empirical evidence. It was affirmed that upon inclusion of independent directors, who have the expertise and training, as a member of audit committee increases firm value five times more than for those firms who only have an independent audit committee.

Most of the studies state that independent audit committee affects performance of the firm either inversely or does not affect at all. Beasley (1996) said that the presence of audit committee does not significantly impact the financial reporting fraud in firms which might mean that monitoring and control does not improve by having audit committee. Abbott et al. (2000) did not support these findings rather declared the presence of an independent audit committee as favorable for controlling fraud. The authors concluded that this can reduce the fraudulent reporting if the audit committee is independent and declares its responsibilities and tasks. Zhang et al. (2007) added to the above by concluding that the audit committee independence not only results in better audit quality, but also eliminates internal control

weaknesses of firms. The authors further advised members of audit committee to have expertise in their field.

2.1.3 Human Resource & Remuneration Committee and Firm Value

Setting-up unbiased selection procedures and deciding upon compensation of top management has been a major issue. Compensation of executives is deemed to be a part of agency issue (Yermack, 1997; Bertrand & Mullainathan, 2001; Bebchuk & Fried, 2003). Recruitment channels were vague and appointments of key executives were mystic.

Researchers have discussed about the elements of human resource management and the ways by which value can be added to HR function of firm so that it helps organization achieve its objectives. Human resource, if professionally managed, can be a source of competitive advantage for firm. Conyon and Peck (1998) surveyed UK firms to identify the role of board monitoring and remuneration committees and found better corporate performance for the firm with more outside directors on Board and having remuneration committees. Klein (1998) suggested having independent remuneration committee because it would lessen agency problem. The incentive programs should be designed in such a way that the goals of management and shareholders are aligned. Collins and Clark (2003) revealed through field study of US firms the fact that HR practices relate with firm performance and top management social networking can bolster improvement in human resource. They proposed the HR practices such as procedures of selection, training and compensation should be performed by an independent committee. These decisions, if solely made by board or CEO, can be biased.

Various studies have evidenced positive relationship between remuneration committee and firm value (Pearce & Zahra, 1992; Main & Johnston, 1993; Barkema & Gomez-Mejia, 1998; Core et al., 1999; Laing & Weir, 1999; Main et al., 2008). The reason behind this fact is that when executives receive adequate compensation then there are fewer agency problems. This reduces the agency cost of the company. These executives perform in good faith with the best utilization of company's resources. Therefore, the value of these firms improves. Moreover, formation of remuneration committee has been considered an important tool for strategic human resource management.

3. Theoretical Framework

Figure below shows the conceptual framework of this research.

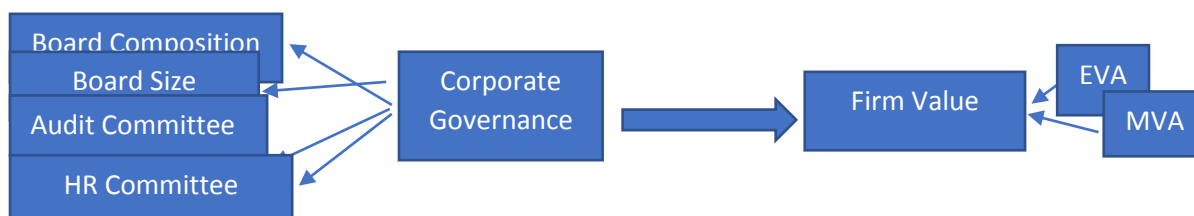


Table 1: Description of Dependent Variables

FVAL = Firm Value	EVA = Economic Value Added	Operating Profits – Cost of Capital
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	MVA = Market Value Added	Market Value of Capital – Invested Capital
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Table 2: Description of Independent Variables

Corporate Governance Measures	Board Composition (ED, NED, ID)	Presence of executive, non-executive and independent directors
	BSize = Board Size	Total number of members of Board
	AC = Audit Committee	Presence of audit committee
	HR = Human Resource & Remuneration Committee	Presence of Human Resource & Remuneration Committee as per the code

The
research
hypothe

ses established in this research based on the above framework is as follows:

H0: = Corporate governance practices have no impact on the firm value.

H1: = Corporate governance practices have an impact on the firm value.

4. RESEARCH METHODOLOGY

4.1 Sample

A sample of 125 manufacturing firms listed on PSX was taken based on their market capitalization and availability of data. The data is obtained for the period 2011-2017 by using audited financial reports of selected firms published on Pakistan Stock Exchange (PSX) and relevant companies' websites.

4.2 Measurement of variables

This research draws its conclusion based on four measures of corporate governance. These are Board composition, Board size, Audit committee and Human Resource & Remuneration (HR&R) committee. The board composition is measured by determining the presence of executive, non-executive and independent directors on board. The board size is measured by the total number of members on board; whereas, the presence of audit committee and human resource committee is required for both audit committee and human resource & remuneration committee variables.

As we need to know the impact of corporate governance measures on the firm value; therefore, we measure the firm value by using the Market Value Added (MVA) and Economic Value Added (EVA). It is defined as the difference between operating profits and

cost of capital. On the other hand, MVA is calculated as the difference between market value of invested capital and its book value. It is referred to as the present value of capital invested.

4.3 Descriptive statistics

The descriptive analysis shows that average MVA was Rs20.6 million. The minimum MVA found to be Rs12.2 million and it reached its peak at Rs29.3 million approximately. Similarly, EVA had an average of Rs19.6 million. The lowest and highest values for EVA were as Rs0.16million and Rs25.2 million respectively with a deviation of Rs1.94 million. The board size was as much as 13 with a minimum of 7 members. On average, there were 8 members in the board with an SD of 1.3. The other explanatory variables i.e. AC, HR, ID, ED and NED were binary variables that only depicted presence and absence of the same with a value of 1 and 0 respectively.

Table 3: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
ac	875	.936	.2448929	0	1
hr	875	.4342857	.4959463	0	1
bs	875	8.0241	1.31289	7	13
id	875	.8102857	.3922992	0	1
ed	875	.9817143	.1340593	0	1
ned	875	.9965714	.058487	0	1
eva	875	19.65502	1.948096	16	25.2
mva	875	20.69137	2.1438	12.2667	29.37361

4.4 Regression Model

The following regression models were used.

$$1. EVA_{it} = \alpha + \beta_1 ED_{it} + \beta_2 NED_{it} + \beta_3 ID_{it} + \beta_4 BSize_{it} + \beta_5 AC_{it} + \beta_6 HR_{it} + \varepsilon_{it}$$

$$2. MVA_{it} = \alpha + \beta_1 ED_{it} + \beta_2 NED_{it} + \beta_3 ID_{it} + \beta_4 BSize_{it} + \beta_5 AC_{it} + \beta_6 HR_{it} + \varepsilon_{it}$$

Where $t = 2011, 2012, 2013, 2014, 2015, 2016, 2017$ and $i = 1, 2, 3, 4 \dots 125$.

We estimate the panel data regression model by using Fixed Effects Model.

3.4.1 Regression Results Model 1

$$EVA_{it} = \alpha + \beta_1 ED_{it} + \beta_2 NED_{it} + \beta_3 ID_{it} + \beta_4 BSize_{it} + \beta_5 AC_{it} + \beta_6 HR_{it} + \varepsilon_{it}$$

This model contains Economic Value Added (EVA) as an explained variable and there are six explanatory variables, i.e. presence of executive directors (ED), presence of non-executive directors (NED), presence of independent directors (ID), number of members of board (BSize), presence of audit committee (AC) and presence of human resource committee (HR).

All the assumptions for linear regression were tested and found satisfactory.

Table: 4 EVA Regression Results Using Fixed Effects Model

Source	SS	df	MS	Number of obs	=	875
Model	694.48756	25	27.7795024	F(25, 849)	=	8.99
Residual	2622.41078	849	3.08882306	Prob > F	=	0.0000
				R-squared	=	0.2094

Total	3316.89834	874	3.79507819	Adj R-squared	= 0.1861
				Root MSE	= 1.7575

Eva	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]	
Ac	.0861061	.2796575	0.13	0.006	-.462795	.6350073
Hr	.7289943	.426008	1.71	0.012	-.107158	1.565147
Bs	-.6904237	.4503867	-1.53	0.019	-1.574426	.1935783
Id	.1601559	.162622	0.98	0.342	-.4793442	.1590324
Ed	.411293	.4587201	0.55	0.144	-.4890654	1.311651
Ned	.5150584	1.061376	0.69	0.038	-1.56817	2.598287
d14	-.1345818	.4697877	-0.29	0.775	-1.056663	.7874997
d15	-.1452291	.4694991	-0.31	0.057	-1.066744	.7762859
d16	-.0532486	.4690037	-0.11	0.009	-.9737912	.8672941
d17	.0782051	.4685526	0.17	0.867	-.8414522	.9978623
d18	-.5775303	.2225905	-2.59	0.010	-1.014422	-.1406382
d19	-.2464905	.2223523	-1.11	0.268	-.6829153	.1899342
Sectorid						
2	-1.384356	.5482162	-2.53	0.012	-2.460374	-.3083384
3	-.9790928	.5174092	-1.89	0.059	-1.994644	.0364583
4	1.175868	.4464011	2.63	0.009	.299689	2.052048
5	-1.595851	.4331663	-3.68	0.000	-2.446054	-.745649
6	-1.186336	.466979	-2.54	0.011	-2.102904	-.2697669
7	-.7931781	.4632922	-1.71	0.087	-1.70251	.1161542
8	-1.109253	.4411647	-2.51	0.012	-1.975154	-.2433512
9	1.277087	.4908362	2.60	0.009	.3136927	2.240482
10	-.9498854	.466233	-2.04	0.042	-1.86499	-.0347808
11	-.8208866	.4727724	-1.74	0.083	-1.748826	.1070532
12	-.503574	.4772559	-1.06	0.292	-1.440314	.4331658
13	-.7001509	.4146114	-1.69	0.092	-1.513934	.1136326
14	-1.646561	.4274191	-3.85	0.000	-2.485483	-.8076392
_cons	20.81282	1.608317	12.94	0.000	17.65608	23.96956

Here the equation has been rewritten considering the intercept differences for different industrial sectors and time period as well. The intercept may vary across individuals as well as over time. This study covered 14 sectors so 13 dummies variables i.e. D_{1i} --- D_{13i} are included for the intra industry intercept differences and D_{14i} --- D_{19i} are dummies for time. Few of the coefficients for industry sectors are significant with very low p-values. This means that the sectors differences exist in this study.

The model has an R^2 value of 0.2094 and p-value 0.0000 which shows the goodness of fit of this model. This R^2 value tells that approximately 21% of the variation is caused in EVA due to the explanatory variables used in the model and the rest of approximately 79% variation occurs due to other variables not identified in this model. The p-value 0 at 5% significance level depicts that the explanatory variables can significantly influence the explained variable in this model. The explanatory variables statistically significant are Audit Committee (AC) having probability of 0.006; Human Resource Committee (HR) 0.012; Board Size (BS) 0.019; and Non-Executive Directors (NED) 0.038 whereas, two variables seem to be

insignificant i.e. Independent Directors (ID) 0.342; and Executive Directors (ED) 0.144. The coefficients of AC, HR, ID, ED and NED variables are positively related with the explained variable EVA. On the other hand, BS has negative relation with EVA which means that the larger the board, the lower the EVA.

4.4.2 Regression Results Model 2

$$MVA_{it} = \alpha + \beta_1 ED_{it} + \beta_2 NED_{it} + \beta_3 ID_{it} + \beta_4 BSize_{it} + \beta_5 AC_{it} + \beta_6 HR_{it} + \varepsilon_{it}$$

This model contains Market Value Added (MVA) as an explained variable and there are six explanatory variables, i.e. presence of executive directors (ED), presence of non-executive directors (NED), presence of independent directors (ID), number of members of board (BSize), presence of audit committee (AC) and presence of human resource committee (HR).

All the assumptions for linear regression were tested and found satisfactory.

Table: 5 MVA Regression Results Using Eixed Effects Model

Source	SS	df	MS	Number of obs	=	875
Model	1081.64453	25	43.2657812	F(25, 849)	=	12.51
Residual	2935.15389	849	3.4571895	Prob > F	=	0.0000
				R-squared	=	0.2693
				Adj R-squared	=	0.2478
Total	4016.79841	874	4.59587919	Root MSE	=	1.8594

mva	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]	
ac	.3433825	.2958636	1.16	0.146	-.2373274	.9240924
hr	.7190916	.4506951	1.60	0.011	-.1655156	1.603699
bs	-3.125615	.4764866	-6.56	0.000	-2.190385	4.060845
id	.3941649	.1720459	2.29	0.022	.0564797	.7318502
ed	-.7304022	.4853028	-1.51	0.133	-1.682936	.2221318
ned	-.6146916	1.122882	-0.55	0.584	-2.818643	1.58926
d14	.1579511	.4970118	0.32	0.051	-.8175649	1.133467
d15	.0687987	.4967065	0.14	0.890	-.9061179	1.043715
d16	.2534465	.4961824	0.51	0.610	-.7204415	1.227334
d17	.2994997	.4957051	0.60	0.546	-.6734516	1.272451
d18	-.2855783	.2354895	-1.21	0.026	-.7477883	.1766316
d19	-.0204871	.2352376	-0.09	0.031	-.4822026	.4412284
sectorid						
2	-.0031577	.5799852	-0.01	0.996	-1.141531	1.135215
3	.2799593	.547393	0.51	0.609	-.7944429	1.354361
4	1.895001	.47227	4.01	0.000	.9680475	2.821955
5	-.9724154	.4582683	-2.12	0.034	-1.871887	-.0729438
6	.0590695	.4940404	0.12	0.905	-.9106143	1.028753
7	1.133829	.4901399	2.31	0.021	.1718007	2.095857
8	.226022	.4667301	0.48	0.028	-.6900581	1.142102
9	3.43799	.5192801	6.62	0.000	2.418767	4.457213
10	.4854083	.4932512	0.98	0.025	-.4827264	1.453543
11	.2050226	.5001695	0.41	0.682	-.7766911	1.186736
12	.6986223	.5049128	1.38	0.167	-.2924015	1.689646
13	.8595363	.438638	1.96	0.050	-.0014058	1.720478
14	.3637975	.4521879	0.80	0.421	-.5237398	1.251335
_cons	13.92138	1.701519	8.18	0.000	10.5817	17.26105

The equation for fixed effect model estimation is rewritten as follows:

$$MVA_{it} = \alpha_1 + \alpha_2 D_{1i} + \alpha_3 D_{2i} + \dots + \alpha_{14} D_{13i} + \gamma_0 + \gamma_1 D_{14} + \gamma_2 D_{15} + \dots + \gamma_6 D_{19} + \beta_1 ED_{it} + \beta_2 NED_{it} + \beta_3 ID_{it} + \beta_4 BSize_{it} + \beta_5 AC_{it} + \beta_6 HR_{it} + \varepsilon_{it}$$

Here the equation has been rewritten considering the intercept differences for different industrial sectors and time period as well. The intercept may vary across individuals as well as over time. This study covered 14 sectors so 13 dummies variables i.e. D_{1i} --- D_{13i} are included for the intra industry intercept differences and D_{14i} --- D_{19i} are dummies for time. Few of the coefficients for industry sectors are significant with very low p-values. This means that the sectors differences exist in this study.

The model has an R^2 value of 0.2693 and p-value 0.0000 which shows the goodness of fit of this model. This R^2 value tells that approximately 27% of the variation is caused in MVA due to the explanatory variables used in the model and the rest of approximately 73% variation occurs due to other variables not identified in this model. The p-value 0 at 5% significance level depicts that the explanatory variables can significantly influence the explained variable in this model. The explanatory variables statistically significant are Human Resource Committee (HR) 0.011; Board Size (BS) 0.000; Independent Directors (ID) 0.022 and whereas, three variables seem to be insignificant i.e. Audit Committee (AC) 0.146; Non-Executive Directors (NED) 0.584 and Executive Directors (ED) 0.133. The coefficients of AC, HR and ID are positively related with the explained variable MVA. On the other hand, BS, ED and NED have negative relation with MVA. The larger the board, the lower is the MVA. The absence of executives and non-executives lead to higher MVA.

5. Discussion and Conclusion

Board size was found to be negatively related with EVA and MVA (Mak & Kusnadi, 2005; Ghosh, 2009; Cho & Rui, 2009). The argument is that large-sized boards confront communication problems, free-rider problem (Lipton & Lorsch, 1992) so the decision-making suffers. Furthermore, large boards are less effective in terms of cost because firms have to pay more remuneration to directors; moreover, large boards have tendency to add more directors instead of replacing the existing ones. Board size was found insignificantly related with MVA. Zahra & Pearce (1989), Goodstein et al. (1994), Chan (2005), Ngai (2012) placed emphasis on the knowledge possessed by the directors on the board rather than the number of directors on board.

The executive directors (ED) variable is found to be insignificantly positively related with all the dependent variable EVA; whereas, insignificantly negatively related with MVA which is consistent with the findings of Yermack, 1996 and Haniffa & Hudaib, 2006. The reason is that the executive directors, who have stake in other competitor firms, may lack interest in one of such firms. This conflicting interest may not let them balance their role in the competing bodies; hence, the firm's performance suffers (Lei & Song, 2012). The existing executives do not let the new directors replace the existing ones: rather they are only added to supplement the old ones and to enlarge the board. In Pakistan, the ownership structures are concentrated. The businesses are usually family-owned; therefore, the executive directors' appointments are biased. A person may not even meet the criteria for becoming an executive. Such executives do not play a significant role in the development and progress of firm.

The independent directors (ID) variable is positively significantly related with MVA; though insignificantly related with EVA. Independent directors are found to be insignificant which is

consistent with the findings of Yermack, 1996; Haniffa & Hudaib, 2006; Elshandidy & Hassanein, 2014. The argument is that the independent directors are not well-aware of the business activities and lack industrial know-how; therefore, they are poor decision makers. Ghosh (2009) found no significant association between outside directors and firm performance for Indian firms. He supported the notion of having concentrated ownership. However, the significance of independent directors has been supported by several researchers Hu et al. (2014) support the assertion that the independent directors – if appropriately compensated – contribute well in the affairs and enhance firm value. They assumed that the independent directors have an internal pressure to perform well since they want to have a noble reputation in the labor market.

Audit committee (AC) variable is found to be significantly positively related with EVA. It is insignificantly related with MVA. Beasley (1996) said that the presence of audit committee does not significantly impact the financial reporting fraud in firms which might mean that monitoring and control does not improve by having audit committee rather it is board composition that accounts for the fair reporting. Al-Mamun et al. (2014) found positive association between audit committee characteristics – size and independence—and EVA. The larger committee provides more expertise and diverse skills which improves audit quality. The independence of audit committee ensures the reliability of financial reporting.

The human resource & remuneration committee (HR) variable is significantly positively related with EVA and MVA yet there are no prior studies that studied this association. The study asserts that having a human resource and remuneration committee improves the firm value.

This study supports the fact that EVA and MVA can be dependable measures in terms of value maximization goal. Firms can escalate this figure by employing the CCG mechanism.

It can be concluded that presence of audit committee ensures the authentication of accounting and auditing techniques applied by the firm. The deceitful and fraudulent acts are controlled in the presence of an audit team. The transparency and complete disclosure builds the faith of investors. Such practices and procedures impact the performance and value of the firm certainly. The presence of human resource committee is appreciated because it promotes a fair and unbiased process of selecting, remunerating and promoting employees of the firm. The human resource committee professionally fulfills its obligations which also lessens agency problem. This fair system is designed in such a way that aligns the goals of management and shareholders. This assures better performance of the firm. The presence of executive directors is essential to have better management techniques. These inside directors understand the circumstances well and are able to share pertinent information in decision making. The presence of independent and non-executive directors controls the agency problem. These outside directors prove to be good monitors as there is less conflict and better control. This study provides sufficient evidence to promote the perception of having non-executives and independent directors. The non-executive directors adhere to strict monitoring and control system that ensures value-increasing opportunities are undertaken which ultimately leads to better profitability. The independent directors have greater exposure of the business environment which aids them to make better decisions in a broad perspective. In the long run, this can add to the value of the firm.

Furthermore, it is also inferred that larger boards deter the firm's financial performance and its value. Large-sized boards confront communication problems and decision-making suffers too. Hence, this study supports the argument of having smaller boards to ensure better information sharing and strong leadership. Smaller boards are more effective in terms of

decision making and control thus it guarantees the firm's better performance and increase in value.

6. Recommendations

Based on the findings of this study, the recommendations are as follows:

- a. Firms must strictly adhere to the corporate governance mechanism. Private-sector firms in Pakistan are mostly run by family-owned structures. These family businesses must be encouraged to implement Code of Corporate Governance (CCG) for various reasons. As the results of this study indicate that firm's financial performance improves by practicing Code of Corporate Governance, therefore, firms should benefit themselves by instigating governance policies. This will certainly improve the financial performance of the firms thus bringing growth in the overall industry. This can ultimately lead to economic progress of the country in the long run (Sarbah & Xiao, 2015).
- b. State-owned companies should also implement the CCG for the same benefits as of private listed companies. This may enhance the country's international image which will further be beneficial for attracting foreign investors. When there will be more foreign investment then it will uplift the industry growth and prosperity. The capital market performance will improve too.
- c. In this era of increased competition, corporations should play their active role in taking all possible measures that can increase their profitability. This is because only profitable firms can eventually sustain the stakeholders associated with it. As per the findings of the study, it is revealed that presence of board composition as mentioned in the CCG designed and implemented by SECP is crucial for the profitability and growth of the companies. Although SECP has made it mandatory for the corporations to implement the CCG properly yet many corporations are not following it. Therefore, it is suggested that SECP should impose penalties on those organizations who are not considering this requirement. It will help implementation of the CCG practices designed and will ultimately help in improving the financial position of the companies. Also it will assure protection of the shareholders right and will result in reducing the agency conflicts as well.
- d. Board composition has been extensively viewed in terms of its monitoring and controlling role. The role of boards must also be considered as a means of resource acquisition. Such selection criterion may be included for the board members which enhances the ability to facilitate the acquisition of essential resources for the firm.
- e. CCG is silent about risk management process in the firm. It is an integral part of firm performance. There must be a comprehensive risk management system for which CCG must provide some insight. Kleffener et al. (2003) found that governance guidelines affect the risk management strategies of companies. An independent risk management committee must be devised in order to cope with the operational and financial risk matters of the firm. It enhances the efficiency of firm's risk management approach and streamlines the risk functions. It also enables the firm to set a standard to manage its specific risks. This ultimately results in lower costs and sound decision making.
- f. Legal enforcement laws must be commenced by the SECP in order to ensure the adherence of the Code of Corporate Governance by the firms. For this purpose, SECP can introduce an independent unit which will ascertain the compliance of CCG along with assurance of charging penalties to the non-complying ones. This independent unit must rank companies on the basis of their compliance on annual basis and share

this report publicly. SECP can offer awards/certificates to the top ranked companies for motivation.

- g. EVA and MVA are considered important by both local and foreign investors for making investment decisions therefore they must become a part of financial reporting. Firms must calculate their own EVA and MVA; also, publish them in the financial reports.

7. Limitations

This study has following limitations.

- a. The study considers 125 listed manufacturing firms only. This can be applied to other types of listed companies and the number of firms can be increased too.
- b. There are few variables of CCG considered in this study. More variables can be included to produce more reliable results.
- c. Further research can be done to establish any association between firm value and CCG; either by including other measures for firm valuation or by using other sophisticated models.

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