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Corporate Governance and Corporate Social Responsibility: The Case of Small, Medium, and Large Firms

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Abstract

This paper aims to explore whether and how firm-level governance mechanisms affects Corporate Social Responsibility (CSR) using a large sample of firms listed at Pakistan Stock Exchange. Further, the paper investigates the differential effects of corporate governance (CG) on CSR across small, medium, and large firms. The findings strongly support the hypothesis that CG alone is not sufficient to induce firms to provide more CSR information. Rather, we show that both CG and ownership structure matters and have a vital role to play in firms' choice of CSR engagement. The results reveal that better governed firms have higher CSR disclosure when compared with lower CG firms controlling for the level of insider ownership. Specifically, the results suggest that firms are more likely to be involved in CSR when insiders' ownership is at medium level (25% to 50%) as compared to low (0 to 25%) or high level (>50%). Nonetheless, the estimates suggest that CSR involvement decreases when the insider ownership goes beyond the 50% level. Finally, the results reveal that there are significant differences in the effects of CG and other underlying empirical determinants of CSR across different sized firms.

Keywords: corporate social responsibility; corporate governance; insiders' ownership; system GMM

1. Introduction

The effectiveness of CG and accountability has been the subjects of heated debate after the corporate accounting scandals around the world. The term CG, although used extensively in the literature, generally lacks a well-accepted definition (Ekanayake, 2011). The existing definitions of CG, at best, can be classified into two categories based on accounting and finance related CG literature, narrow and broad, depending on the extent to which CG issues are addressed therein. The narrow perspective is orientated towards only corporate accountability to shareholders. However, CG within the broader

perspective requires corporate accountability to shareholders and other stakeholders (e.g., investors, lenders, employees, customers, suppliers, government auditors). 'Securities and Exchange Commission of Pakistan' [SECP] (2005) defined CG as:

"The mechanism by which the agency problems of corporation stakeholders, including the shareholders, creditors, management, employees, consumers, and the public at large are framed and sought to be resolved."

Along with the acceleration of CG mechanisms, one of the most important corporate trends of the previous decade is the growth of CSR (Khan et al., 2012). As in Ghazali (2007), in these days, the main objective of the organizations is not only to make maximum profit but it also includes an element of CSR and accountability. This is because the business could not prosper in segregation. Rather, it also significantly depends on the society to operate efficiently. There are several studies that have separately explored CSR and CG in different aspects. However, there is relatively less research on the link between CG and CSR. Ghazali (2007) argues that CSR reporting means information disclosure on community development, environmental reporting, products and services, and human resource aspects.

Corporate governance needs to be considered in determining CSR disclosure especially board composition and ownership structure because CSR reporting is affected by the motives, values, and choice of those who are involved in organizations decision making process (Lau et al., 2016). Since, both ownership and board structure significantly differ not only across firms but also across industries and nations, it is predicted that CSR will also vary subsequently. In a firm with a high level of ownership concentration, the incentive should be higher to support the controlling owner entrenchment. Nevertheless, it will be difficult for management to use CSR to mask their opportunistic behaviors, if an effective system exists to monitor their decisions. However, Choi et al. (2013) suggest that in weak governed firms CSR involvement induced by opportunistic managers would be more prominent in order to fulfill personal objectives by overinvesting in CSR. Hence, CSR debate continues to flourish without a clear consensus on its meaning or value.

1.1 Research Problem

In principle, CG, ownership structure, CSR may have different strengths of relationship, depending on the market's level of legal protection and the extent of concentrated ownership. However, empirical evidence on this relationship is very limited. Yet, it is important to know how CG is related to CSR. It is also important to understand how the level of ownership structure and degrees of ownership concentration affect the association between CG and CSR.

1.2 Literature Gaps and Contributions of the Study

The role of CG in stakeholders' value creation has become the subject of great interest recently. Nonetheless, most of the previous studies follow a fragmented approach, investigating the link between isolated aspects of governance and CSR. However, it could be argued that firms choose sets of governance arrangements, which in turn, are analysed as a whole by investors. Furthermore, it is assumed that CG mechanisms are

complements and can act as substitutes for each other (Cheung et al., 2011). Therefore, rather focusing on just individual aspects of CG, the current study also employs a composite measure of CG. In addition, the review of the literature on CG has shown that the previous existing studies have included either only relatively large firms in their sample or pooled all listed firms. However, different sized firms have different characteristics including ownership structure and information asymmetries (Ronnie Lo, 2009). Hence, this study contributes to the literature by classifying the sample firms into large, medium, and small firms. By doing this, the study provides a novel contribution to the literature as shown by results that firms of different sizes differ in terms of their CG. Moreover, the literature review also suggests that there is lack of longitudinal studies on CG. Thus, we do not have robust evidence on the role of CG in firms' CSR activities. Nevertheless, the panel nature of our data enables us to examine the CG-CSR link over a period of twelve years. Definitely, combining cross sectional variations across time in CG will yield more reliable and robust estimates. Furthermore, CG measures used in previous studies are not devised to rank firms on CG quality. However, in this study, firms are ranked into high CG and low CG on the basis of their median score of CG.

This study also contributes further evidence on the issue whether CSR is a joint function of the CG and the ownership structure of firms. The previous existing studies on the association between CG and CSR do not emphasize on the issue on these lines. Hence, this study presents a novel contribution to the literature by showing that firm's social performance varies with the level of its insiders' ownership, and the pattern differs relying jointly on CG and insider ownership.

1.3 Significance of the Study

The findings of this study have important implications. For the managers, the empirical results presented in the paper clarify that the costly exercise of disclosure of CG information can help in enhancing CSR. Similarly, the regulators may take the results into consideration when they are going to determine the appropriate levels of disclosure and compliances of regulations in the future. The results show that the implementation of CG codes that came into effect from 2002 are effective and have enhanced CG level. The CG role of mitigating agency conflicts to maximize wealth of shareholder has evolved to now creating value for not only shareholders but also protecting all other stakeholders' interests. In Pakistan, the ownership of firms is highly concentrated in families and business is conducted under a week legal investor-protection regime (Javid & Iqbal, 2010). The separation of ownership and control in Pakistani firms is not as clear as in the Western countries. Therefore, the empirical findings on the role of CG in CSR activities based on a sample of Pakistani firms can have significant meanings and implications for those firms operating in markets in which high concentration in family ownership is prevalent.

1.4 Theoretical Orientation

For developing and testing the research hypotheses, it is important to establish a theoretical base. The theoretical foundation of this study is premised primarily on agency,

stakeholder, and legitimacy theories. Furthermore, most of the results of this study are supported by these theories. The most prominent is the agency theory as majority of the CG research evolves from this theory. According to Mees (2015), in the CG literature, agency theory is commonly used to describe firm managers' CG decisions. However, due to the differences in environmental characteristics, the applicability of agency theory in Pakistan may be different than developed countries. Hence, the risk of expropriation by the dominant or controlling shareholder is the main agency problem and not the manager-shareholder conflict (Javid & Iqbal, 2010). As this study investigates the impact of CG on CSR, CG is the outcome of agency problem (ownership structure). Therefore, the theory of agency is used in this study to understand the managers' behaviour. The agency theory is pertinent as it explains the conditions under which a company is likely to adopt CG practices.

Contrary to the agency theory, the theory of stakeholder is a broader concept that considers the interests of diverse constituents comprising interest groups related to environmental, social, and ethical considerations (Mainardes et al., 2011). Pease and Macmillan (1993) argue that in the modern concept of CG, a set of legislative, regulatory and legal market mechanisms are put in place inviting firms to consider all other interest groups. Under a stakeholder approach, the support of all of their stakeholders would be required by a company in order to be successful and survive in the long run. Hence, social pressure is likely to influence the future course of CG, where firms have to focus their attention on larger stakeholders' community.

The stewardship theory unlike the agency theory is an alternative theory for researchers, which states that the agents are trustworthy and good stewards of firms' resources. This makes monitoring unnecessary (Hu & Alon, 2014). The legitimacy theory asserts that the survival of companies depends on the extent to which they operate according to the bounds and norms of the society. CG can be related to the legitimacy concept because management has to legitimise its actions in order to be accepted in the society (Frynas & Stephens, 2015). Through CG information, organisations signal to all their stakeholders that they are abiding with the terms of the social contract and hence attain the legitimacy imperative for their continued survival.

Furthermore, both legitimacy and stakeholder theories can be regarded as complementing each other. In particular, the stakeholder theory provides the basis for legitimacy theory. Based on the above discussion, we can conclude that there is some degree of consistency, complementarity, and compatibility of these theories with each other.

2. Literature Review

Jo and Harjoto (2011) find that after controlling for various firm characteristics several governance mechanisms including board leadership and independence, analyst following, institutional ownership, and antitakeover provisions appears to have a direct positive influence on CSR engagement. However, one should note that Jo and Harjoto use only institutional ownership to study its impact on CSR, whereas Khan et al. (2012) also used foreign and public ownership and percentage of ownership held by management. The results provide evidence that foreign and public ownership, presence of audit committee,

and board independence have significant positive effect on CSR disclosures, however negative in the case of management ownership. Nevertheless, they fail to find any significant evidence between CEO duality and CSR disclosure. They also document that the dominance of family ownership on CSR disclosure is alleviated to some extent by sound CG mechanisms. In contrast to Jo and Harjoto (2011) and Khan et al. (2012), Ghazali (2012) finds that boards with independent directors are less involved in CSR activities. The result may imply that for independent directors, CSR engagement is not the primary concern. However, the result was statistically significant at margin (the 10% level).

Ghazali (2007) finds evidence that CSR disclosure is significantly higher in firms that are larger in size and have higher government ownership. However, similar to Khan et al. (2012), Ghazali finds that high proportion of management ownership and CSR disclosure is negatively correlated. On the other hand, Said et al. (2009) show that only the presence of audit committee, ownership concentration, and government ownership significantly positively impact the extent of CSR disclosures. Their results contradict the findings of previous studies discussed above that ownership concentration and CSR are negatively correlated.

The results presented by Giannarakis (2014) indicate that profitability, the board commitment to CSR, and firm size positively affect the extent of CSR disclosure, whereas financial leverage and CSR disclosure is inversely related. Rees and Rodionova (2015) examine whether CG promotes CSR disclosure through its effect on managers' intention and whether CG mediates the influence of family ownership on social and environmental improvements. Their results reveal that ESG performance is negatively affected by closely held equity and family ownership. Nevertheless, after controlling for CG, closely held equity and ESG score is no longer associated but family ownership retains a significant inverse relationship.

Branco and Rodrigues (2008) find that company size is a crucial determinant for both types of disclosure. The factor of media exposure is an important characteristic only for annual reports while financial leverage has a negative effect on the extent of disclosure based on the web sites. Finally, profitability is positively significant only to products and consumers information of annual reports. Reverte (2009) finds evidence that industry type, firm size, and media exposure are the most crucial determinants of the extent of CSR disclosure. In addition, the results also reveal that firms with higher CSR ratings have a less concentrated ownership. Nevertheless, the variable financial leverage does not seem to explain differences in CSR disclosure, hence contradicting with the findings of Giannarakis (2014). Mallin and Michelon (2011) investigate whether board reputation (board diversity, leadership, composition, competence, and structure) affect social performance of firms. The results suggest that corporate social performance is positively related to the proportions of independent, community influential and female directors. Nevertheless, community influential directors with multiple directorships and CEO duality significantly negatively affect corporate social performance.

Jain and Jamali (2016) critically review the previous literature on the impact of CG mechanisms at the institutional, firm, group, and individual levels on CSR. They argue that theoretically there is a strong case for CG as an antecedent of CSR and promising patterns are beginning to emerge in the literature. Yet, the empirical evidence remains mixed and inconclusive in some areas. They recommend that greater scholarly attention needs to be accorded to disaggregating variables and comprehending how multiple configurations of CG mechanisms interact and combine to impact firms' CSR behavior.

Lau et al. (2016) provide evidence that state ownership positively affects CSR performance, whereas concentrated ownership negatively affects CSR. The variable board composition and composition of TMT is not statistically significant. However, board size as well as board members having foreign experiences have significant effects on CSR. Jizi et al. (2014) find that even after controlling for profitability, audit committee characteristics, size and risk, and board meeting frequency, both size and independence of the board positively affect disclosure of CSR. However, in contrast to Khan et al. (2012) who find insignificant link between CEO duality and CSR, Jizi et al. (2014) find a significant positive association between CEO duality and CSR.

Liu and Zhang (2017) examine the link between CG, CSR, and enterprise value. The results reveal that supervisory board meetings, state ownership, number of directors, and managerial shareholding positively affect CSR while ownership by largest shareholders negatively affects CSR. Moreover, they find that CSR information is not beneficial for the short-term profit of an enterprise but can increase its long-term value. Manasakis et al. (2014) show that hiring 'individually' socially responsible CEO acts as a commitment device for the firm's owners and signal to consumers that the missioned CSR activities will be undertaken. They further show that for consumers as well as firms corporate social responsibility activities are welfare enhancing.

To some extent our study is closer in spirit to Ghazali (2007) and Rees & Rodionova (2015). However, they examine the impact of CG on managers' intention to promote CSR. They have simply studied the impact of management and/or family ownership on CSR. We substantially depart from these papers as we investigate how CSR is related to firms' state of CG, subject to the various levels of ownership structure and degrees of ownership concentration, controlling for the impact of external CG and other firm characteristics. Theoretical framework constructed based the review of the existing literature is presented in Figure 1. The figure shows that CG index is developed based on board composition, transparency and auditing, and disclosure factors. The figure also shows that the constructed index is then related to SCR activities as per proposed by the agency theory, legitimacy theory, and the stakeholder theory. The summary of the literature review is presented in Table 1.

Table 1: Summary of Literature Review on Corporate Governance and Corporate Social Responsibility

Author (s)	Sample	Time Period	CSR Measure	Model	Main Finding
Jo and Harjoto (2011)	2,952 U.S. firms	1993–2004	Kinder, Lydenberg, and Domini's Index	Probit, Tobit, and 2SLS	Positive
Khan et al. (2012)	116 Dhaka Stock Exchange listed firms	2005-2009	Self-constructed index	Multiple regression model	Management ownership (-) Outside directors (+) Governance committees (+)
Ghazali (2012)	27 Bursa Malaysia listed firms	2005 and 2007	Self-constructed index	Paired-sample t-test	Positive
Ghazali (2007)	87 companies listed on Bursa Malaysia	2001	Self-constructed index	Multiple regressions	Firm size (+) Government ownership (+) Management ownership (-)
Said et al. (2009)	150 Malaysian public listed companies	2006	Self-constructed index	Hierarchical regression analysis	Insignificant
Giannarakis (2014)	100 U.S. firms	2011	ESG score	Multiple linear regression	Insignificant
Rees and Rodionova (2015)	3,893 firms from 46 countries	2002-2012	ESG score	OLS	Closely held equity (-) Family ownership (-)
Branco and Rodrigues (2008)	49 companies listed on Portuguese Stock Exchange	2003	Self-constructed index	Multiple linear regression	Company size (+) Financial leverage (-) Profitability (+)
Reverte (2009)	35 largest Spanish firms	2005 and 2006	The Observatory on CSR	Linear regression model	Industry type (+) Firm size (+) Media exposure (+) Concentrated ownership (-)

Mallin and Michelon (2011)	100 firms listed in the Business Ethics 100 best corporate citizens	2005-2007	KLD database	OLS	Positive
Jain and Jamali (2016)	N/A	2000-2015	N/A	N/A	Theoretically there is a strong case for CG as an antecedent of CSR. The empirical evidence remains mixed and inconclusive in some areas
Lau et al. (2016)	471 firms in China	2010 and 2011	KLD and Global Reporting initiative	OLS	State ownership (+) Concentrated ownership (-) Board size (+) Board with foreign experiences (+)
Jizi et al. (2014)	193 US commercial banks	2009–2011	Self-constructed index	Tobit and Linear Panal regression	Board independence (+) Board size (+)
Liu and Zhang (2017)	968 firms in China	2008 to 2014	CSMAR measure	OLS	Positive
Manasakis et al. (2014)	Two large publicly traded firms in oligopolistic markets	2011	Self-constructed index	Hackner (2000) and Manasakis et al. (2013)	Socially responsible CEO acts as a commitment device for the firm's owners

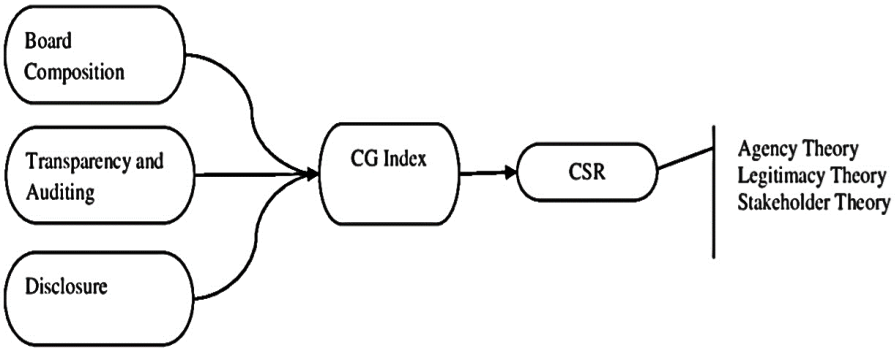

Figure 1. Theoretical Framework constructed on the basis of literature review

3. Data and Methods

This study is an empirical examination of the impact of CG and insider ownership on CSR for the period 2003-2014. In order to collect CG (18 indicators) and CSR (20 indicators) data, complete firm annual reports were required to be crossed checked against each indicator. However, the annual reports for all listed firms for 12 years period were not available. Hence, after all the efforts we collect a total of 1871 annual reports for a sample of 200 firms listed at the Pakistan Stock Exchange (PSX). We divided the sample into three groups small, medium, and large on the basis of their market capitalization. The study uses three sources to obtain secondary data: 1) analysis of financial statements of PSX listed firms (2006 to 2011); 2) balance sheet analysis of joint stock companies (1999 to 2004); 3) PSX website and firms annual reports as well as websites. The study uses a modified Corporate Social Responsibility Score/Index (CSRS) which includes items relevant to Pakistani firms (see Appendix 1). The index contains scores for the four categories: (1) community involvement; (2) environmental; (3) employee information; and (4) product and services information. A dichotomous procedure is applied whereby companies are awarded 1 if they disclose a certain item and 0 if not. A self-constructed index of CG is used in this study (see Appendix 2). The index consists of 18 CG provisions (i.e., 10 items in the board category, 4 items each in the audit and disclosure category). A scale of 0 to 4 is used to construct CG score. Furthermore, we sum the total score achieved by each firm on each CG item and divide it by maximum possible score and then multiplied by 100.

3.1 Empirical Models

The system Generalized Method of Movement (SGMM) is employed in this study as an estimation method. The following dynamic panel data model is formulated:

$$\begin{aligned}\mathrm{CSRS}_{it} = {} & \alpha + \beta_1(\mathrm{CSRS})_{it-1} + \beta_2(\mathrm{CG-score})_{it} + \beta_3(\mathrm{BRD-score})_{it} + \beta_4(\mathrm{AUD-score})_{it} \\ & + \beta_5(\mathrm{DSC-score})_{it} + \beta_6\left(\frac{\mathrm{Debt}}{\mathrm{Assets}}\right)_{it} + \beta_7(\mathrm{FRAGE})_{it} + \beta_8(\mathrm{GR})\mathrm{i,t} \\ & + \beta_9(\mathrm{LnAssets})_{it} + \beta_{10}(\mathrm{INSIDOWN})_{it} + \beta_{11}\left(\frac{\text{Net income}}{\text{Common equity}}\right)_{it} \\ & + \beta_{12}(\mathrm{Family})_{it} + \varepsilon_{it} \qquad (1)\end{aligned}$$

Where, CSRS is dependent variable which denotes corporate social responsibility score, $\mathrm{CSRSi,t-1}$ is one period lagged of dependent variable, $\mathrm{CG-score}$ is CG score, $\mathrm{BRD-score}$ is board of director's sub-score, $\mathrm{AUD-score}$ is audit sub-score, $\mathrm{DSC-score}$ is disclosure sub-score, $\frac{\mathrm{Debt}}{\mathrm{Assets}}$ is debt ratio, FRAGE is firm listing age, GR is firm growth in assets, $\mathrm{LnAssets}$ is logarithm of total assets, INSIDOWN is insider ownership measured by percentage of equity owned by members of the board including their family members, $\text{Net income}/\text{Common equity}$ is a proxy of return on equity, Family is a dummy variable where 1 belongs to family and 0 otherwise, and ε is the error term.

Furthermore, in order to explore the joint impact, CG is divided into two categories High and Low on the basis of their medium score following Ronnie Lo (2009) and Cheung et al. (2011). However, insiders' ownership is categorized into low (0-25%), medium (25%-50%), and predominant (>50%) ownership. Hence, the following model is formulated:

$$\begin{aligned}\mathrm{CSRS}_{it} = {} & \alpha + \beta_1(\mathrm{CSRS})_{it-1} + \beta_2(\mathrm{Family})_{it} + \beta_3(\mathrm{BRD-score})_{it} + \beta_4(\mathrm{AUD-score})_{it} \\ & + \beta_5(\mathrm{DSC-score})_{it} + \beta_6\left(\frac{\mathrm{Debt}}{\mathrm{Assets}}\right)_{it} + \beta_7(\mathrm{FRAGE})_{it} + \beta_8(\mathrm{GR})_{it} \\ & + \beta_9(\mathrm{LnAssets})_{it} + \beta_{10}\left(\frac{\text{Net income}}{\text{Common equity}}\right)_{it} + \beta_{11}(\mathrm{D_H \times D_M})_{it} + \beta_{12}(\mathrm{D_H \times D_P})_{it} \\ & + \beta_{13}(\mathrm{D_L \times D_L})_{it} + \beta_{14}(\mathrm{D_L \times D_M})_{it} + \beta_{15}(\mathrm{D_L \times D_P})_{it} + \varepsilon_{it} \qquad (2)\end{aligned}$$

Where,

$\mathrm{D_H \times D_M}$ = High CG and medium ownership category

$\mathrm{D_H \times D_P}$ = High CG and predominant ownership category

$\mathrm{D_L \times D_L}$ = Low CG and low ownership category

$\mathrm{D_L \times D_M}$ = Low CG and medium ownership category

$\mathrm{D_L \times D_P}$ = Low CG and predominant ownership category

The one-way ANOVA used in this study compare the means of large, medium and small Cap groups and determines the differences between these groups. Specifically, it tests the null hypothesis:

H_0: $CG\text{-}score_L = CG\text{-}score_M = CG\text{-}score_S$

H_1: At least one of them is different

Where

$CG\text{-}score_L$ = mean CG score of large Cap firms

$CG\text{-}score_M$ = mean CG score of medium Cap firms

$CG\text{-}score_S$ = mean CG score of small Cap firms

If the null hypothesis is rejected, further, Tukey-Kramer post-hoc test will be employed to compare different pairs of means and see which are significantly different from each other. Furthermore, the following model is formulated to identify factors that determine firm-level CG:

$$\begin{aligned} \mathrm{CG-score_{it}} = {} & \alpha + \beta_1(\mathrm{CG-score})_{it-1} + \beta_2\left(\frac{\mathrm{Debt}}{\mathrm{Assets}}\right)_{\mathrm{it}} + \beta_3(\mathrm{FRAGE})_{\mathrm{it}} \\ & + \beta_4(\mathrm{GR})_{\mathrm{it}} + \beta_5(\mathrm{LnAssets})_{\mathrm{it}} + \beta_6(\mathrm{INSIDOWN})_{\mathrm{it}} + \beta_7(\mathrm{Family})_{\mathrm{it}} \\ & + \beta_8\left(\frac{\mathrm{Net\ income}}{\mathrm{Common\ equity}}\right)_{\mathrm{it}} + \varepsilon_{\mathrm{it}} \end{aligned} \quad (3)$$

3.2 Hypotheses

- **H_1:** There is positive association between CG and the choice of CSR engagement.
- **H_2:** It is expected that firms with low level of CG will have lower CSR as compare to firms with high CG level, controlling for the level of insiders' ownership.
- **H_3:** It is expected that firms of different sizes differs in terms of their CG score.
- **H_4:** Company characteristics as well as concentrated ownership significantly affect CG.

4. Empirical Results

4.1 Descriptive Statistics

The descriptive statistics are presented in Table 2 (large Cap), Table 3 (Medium Cap), and Table 4 (Small Cap). As mentioned previously this study tries to examine the link between CG and CSR with respect to insider ownership, the key variables of interest are CG, CSR, and insider ownership. The minimum and maximum values of the CSR score are 10% and 95% with a mean (median) of 53% (55%) for large Cap firms. The results suggest that half of the large Cap firms have CSR score of more than 55%. The mean (median) CSRS is 36% (30%) in medium Cap firms followed by small Cap firms, whereas the mean (median) is 26% (25%). The highest mean CG-score is 60% for large Cap firms followed by medium Cap firms 54%. Small firms have the highest mean value of insider ownership is 35.69, whereas for medium Cap firms, the mean value is 24.78. However, the mean value is the lowest for large Cap firms (8.17).

Table 2: Summary Statistics of Large Capitalization Firms

				Quantiles			
Variable	**Mean**	**S.D.**	**Min**	**25th**	**50th**	**75th**	**Max**
CG-Score	0.60	0.14	0.25	0.51	0.60	0.71	0.94
BRD-Score	0.64	0.12	0.33	0.55	0.65	0.70	0.90
AUD-Score	0.72	0.14	0.25	0.69	0.75	0.75	1.00
DSC-Score	0.41	0.35	0.00	0.00	0.50	0.75	1.00
CSRS	0.53	0.18	0.10	0.40	0.55	0.65	0.95
Net Income/Common Equity	-0.45	14.78	-319.09	0.10	0.20	0.32	2.97
GR	0.18	0.30	-0.69	0.03	0.13	0.25	2.75
LnAssets	10.06	1.18	6.11	11	10.08	10.75	13.11
Debt/Assets	0.52	0.26	0.09	0.32	0.51	0.69	2.16
FRAGE	30.19	13.04	6.00	19.00	31.00	44.00	55.00
INSIDOWN	8.17	16.64	0.00	0.00	0.12	7.77	88.50

Table 3: Summary Statistics of Medium Capitalization Firms

				Quantiles			
Variable	**Mean**	**S.D.**	**Min**	**25th**	**50th**	**75th**	**Max**
CG-Score	0.54	0.11	0.25	0.46	0.53	0.61	0.93
BRD-Score	0.61	0.11	0.30	0.53	0.63	0.68	0.98
AUD-Score	0.68	0.13	0.25	0.69	0.69	0.75	1.00
DSC-Score	0.23	0.30	0.00	0.00	0.00	0.50	1.00
CSRS	0.36	0.18	0.05	0.25	0.30	0.50	0.85
Net Income/Common Equity	0.06	0.68	-17.5	0.02	0.11	0.20	3.99
GR	0.17	0.39	-0.82	0.00	0.09	0.23	7.44
LnAssets	8.25	1.01	4.90	7.52	8.23	8.94	11.33
Debt/Assets	0.57	0.25	0.01	0.42	0.58	0.70	3.10
FRAGE	29.01	11.42	6.00	21.00	27.00	38.00	56.00
INSIDOWN	24.78	26.58	0.00	1.41	13.86	43.40	97.47

Table 4: Summary Statistics of Small Capitalization Firms

				Quantiles			
Variable	**Mean**	**S.D.**	**Min**	**25th**	**50th**	**75th**	**Max**
CG-Score	0.48	0.10	0.21	0.42	0.49	0.56	0.75
BRD-Score	0.58	0.12	0.20	0.48	0.58	0.68	0.80
AUD-Score	0.63	0.16	0.25	0.44	0.69	0.75	0.75
DSC-Score	0.12	0.20	0.00	0.00	0.00	0.25	1.00
CSRS	0.26	0.13	0.05	0.15	0.25	0.35	0.80
Net Income/Common Equity	0.01	1.06	-10.2	-0.08	0.05	0.15	11.57
GR	0.08	0.25	-0.62	-0.05	0.03	0.17	1.44
LnAssets	7.10	1.14	3.89	6.41	7.13	7.80	11.15
Debt/Assets	0.83	0.89	0.11	0.53	0.66	0.82	12.16
FRAGE	30.98	10.95	7.00	22.00	29.00	44.00	56.00
INSIDOWN	35.69	27.53	0.00	9.05	34.48	59.08	93.11

4.2 Correlation Results

The Pearson correlation coefficients between the dependent variables and the independent variables are presented in Tables 5, 6, and 7. Correlation analysis is used following previous studies to check multicollinearity among variables in empirical models. Gujarati (2003) argues that multicollinearity may threaten the regression analysis at a threshold of 0.80 or 0.90. From the results it can be seen that multicollinearity does not appear to be a problem between the variables in any of the three samples.

Table 5: Correlation Matrix for Large Capitalization Firms

Variables	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
CG-Score	1.0000							
CSRS	0.4385***	1.0000						
Debt/Assets	-0.0258	0.0131	1.0000					
FRAGE	0.0167	0.2732***	0.0387	1.0000				
GR	-0.1131**	-0.0910*	-0.0033	-0.0125	1.0000			
LnAssets	0.2580***	0.2615***	0.2504***	0.0623	0.0075	1.0000		
INSIDOWN	-0.2586***	-0.2705***	-0.0923**	-0.0208	0.1046**	-0.1978***	1.0000	
Net Income/Comm Eq	0.0317	-0.0040	-0.082*	-0.0423	-0.0445	-0.0628	0.0212	1.0000

Table 6: Correlation Matrix of Medium Capitalization Firms

Variables	1	2	3	4	5	6	7	8
CG-Score	1.0000							
CSRS	0.5057***	1.0000						
Debt/Assets	-0.1534***	-0.1378***	1.0000					
FRAGE	0.0239	0.1461***	-0.0136	1.0000				
GR	-0.0526	-0.0468	-0.0872**	0.0384	1.0000			
Ln Assets	-0.0137	0.1463***	0.2450***	-0.0147	-0.0398	1.0000		
INSIDOWN	-0.2764***	-0.1613***	0.0628**	0.0008	0.0571*	-0.0244	1.0000	
Net Income/ Common Equity	0.0002	0.0357	-0.1273***	0.0189	0.0641**	-0.0824**	0.0197	1.000

Table 7: Correlation Matrix of Small Capitalization Firms

Variables	1	2	3	4	5	6	7	8
CG-Score	1.0000							
CSRS	0.398***	1.0000						
Debt/Assets	-0.2272***	-0.1672***	1.0000					
FRAGE	0.0500	0.2428***	-0.1032**	1.0000				
GR	0.0478	0.0434	-0.2258***	0.1022**	1.0000			
Ln Assets	0.0685	0.1934***	-0.277***	-0.0845*	0.067	1.0000		
INSIDOWN	-0.2518***	0.0773*	-0.1360***	-0.1982***	0.0177	-0.0218	1.0000	
Net Income/ Common Equity	-0.0054	0.0031	0.0042	-0.0677	0.0114	0.0347	-0.0519	1.0000

4.3 GMM Estimation Results: Corporate Governance and Corporate Social Responsibility

The Hansen J statistic test indicates that the instruments used in the study are valid. In addition, the autocorrelation test of Arellano–Bond presents no evidence of model misspecification. The results document that CG enhancement is linked with a significant increase in CSR in pool, large, medium, and small Cap firms. Specifically, the results suggest that an increase of one unit in $CG-score$ is associated with an increase of 0.10 in CSRS in pooled regression, 0.09 in large sample firms, 0.12 in medium sample firms, and 0.06 in small sample firms. Hence, the empirical evidence suggests that CG is an important determinant of enhancing CSR disclosures in annual reports. Khan et al. (2012) argue that closely held small companies may be less active in investing in social activities because there will be relatively low level of public interest and because the costs of such investment may far outweigh its potential benefits. As previously mentioned, prior literatures have used isolated aspects of CG rather using a composite measure. Hence, this paper provides a novel contribution to the literature about the link between CG and CSR by using a broad measure of 18 CG provisions. Further, the variable board score used in this study is comprised of 10 CG practices. No single study has used such a broad measure they either use board independence or board size (e.g., Jo & Harjoto, 2011; Khan et al., 2012; Ghazali, 2012) as a proxy for board compositions. The results reveal that board of directors sub-score is significantly positively associated with CSR in all samples. From the perspective of agency theory, better governed boards are more interested in the long term sustainability of a company i.e. CSR engagement rather than focusing on just short-term financial performance targets (Jizi et al., 2014). In addition, from the Legitimacy theory perspective, better governed boards with higher independence are helpful in constituting and preserving corporate legitimacy for their credibility and reputation (Liu and Zhang (2017). Nonetheless, for a company in an emerging economy like Pakistan in order to preserve its competitiveness a significant consideration is the financial performance. In order to sustain its financial performance a firm with better governance would be in a better position which will ultimately influence its CSR performance. Hence, we conclude that social performance is the result of a properly designed governance structure.

Moreover, audit and disclosure sub-scores are positive and statistically significantly related to CSR. The agency theory suggests that audit effectiveness mitigates asymmetric information between firm insiders and outside investors and stakeholders and in turn enhancing the reliability of corporate reporting (Jizi et al., 2014). The audit committee works in collaboration with the board and is recognized as indispensable to the effectiveness of the board. Nevertheless, it is unlikely that members of the audit committees understanding about CSR activities is associated to their financial expertise, however generally they might have a more positive attitude to disclosure. Said et al. (2009) and Khan et al. (2012) also find similar result however they used a narrow measure. From the coefficients on $BRD-score$, $AUD-score$, and $DSC-score$ in the

three samples, it can be seen that audit sub-score plays a major role in influencing CSR as compared to other categories of CG.

The results also suggest that there is a significant negative relation between the debt ratio and CSR in all sized firms. Hence, the negative association suggests that creditor stakeholders will apply less pressure to inhibit managers' prudence over activities of CSR. This finding is consistent with the findings presented in Branco and Rodrigues (2008) and Giannarakis (2014). However, Reverte (2009) and Sariannidis (2014) do not find any statistically significant association. On the other hand, Esa and Ghazali (2012) find that firms with high leverage ratios enclose more information on CSR. However, they use web pages as the source of CSR information rather than annual reports.

The results show that firm size (LnAssets) is positive and highly significant in explaining the likelihood of choosing CSR engagement. Stakeholder groups provide more attention to larger firms and therefore to exhibit social responsibility such firms would be under greater public pressure (Ghazali, 2007). The empirical results of prior studies document that size and the extent of social disclosure have positive correlation (e.g., Ghazali, 2007; Said et al., 2009; Giannarakis, 2014; Jizi et al., 2014). On the other hand, Rees and Rodionova (2015) do not find any significant association. The reason may be that they have used a different proxy to measure firm size and a small sample.

The literature has provided different evidence on the association of profitability with CSR in the form of a negative, a positive, or an uncertain link. As shown in case of pooled sample and small Cap firms, ROE and CSR have a significant positive association confirming the legitimacy theory hypothesize, suggesting that firms with higher financial performance demonstrate their contribution to society's well-being and will act in more socially responsible ways than unprofitable companies because in general it is a costly decision. Similar result was found by Said et al. (2009) and Jizi et al. (2014). Nevertheless, the study fails to find any significant evidence between ROE and CSR in large and medium Cap firms. Said et al. (2009) also find no association between profitability and CSR disclosure.

The results further document that firms' involvement in social activities is negatively affected by high ownership concentration measured by insiders' ownership. At higher level of managerial ownership, public accountability will be less concerned for directors, resulting in low disclosure of CSR (Ghazali, 2007). The result further implies that high share ownership by executive and non-independent director's results in less CSR disclosure. In contrast, Khan et al. (2012) provide evidence that higher management ownership is associated with increased CSR disclosure in export-oriented industries. The reason behind this result is the fact that management ownership in export-oriented industries is very small hence pressures exerted by powerful stakeholder groups as a principal driver of CSR reporting.

Further, the results reported show that family firms as compared to non-family firms avoid engagement in CSR. Rees and Rodionova (2015) argue that families oppose CSR investments as being value destroying. Family firms do not have the reputational pressure for social and environmental responsibility from the beneficiaries due to their large and

long term ownership stakes and will therefore oppose to excessive investment in CSR because it may not bring personal benefits. Rees and Rodionova (2015) find that ESG performance is negatively affected by closely held equity and family ownership.

As compared to younger firms, there will be more CSR involvement and reputation for older firms due to their deep societal presence and comparatively more legitimacy. Nevertheless, opposed to this expectation, firm age is found to have insignificant association with CSR, suggesting that age of the firm does not influence the decision of CSR disclosure. The reason behind this association is the fact that company age is measured in this study by the actual listing status i.e. the time span between when a firm was listed on PSX and the study period. Nonetheless, there are recently listed firms in Pakistan that were present for a long time even before their listing.

Table 8: Regression Results for Corporate Governance and Corporate Social Responsibility (Pooled Sample)

Variables	(1)	(2)	(3)	(4)
CSRS (-1)	0.9382*** (0.000)	0.9432*** (0.000)	0.9921*** (0.000)	0.9972*** (0.000)
CG-Score	0.0993*** (0.000)			
BRD-Score		0.04915*** (0.002)		
AUD-Score			0.1179*** (0.000)	
DSC-Score				0.0264*** (0.000)
Debt/Assets	-0.0016 (0.314)	0.0001 (0.940)	-0.0007 (0.713)	-0.0014 (0.256)
FRAGE	0.0002 (0.717)	0.0007 (0.175)	0.0004 (0.411)	-0.0002 (0.621)
GR	-0.0044*** (0.000)	-0.0049*** (0.000)	-0.0048*** (0.000)	-0.0021** (0.042)
LnAssets	0.0136*** (0.000)	0.0123*** (0.000)	0.0112*** (0.000)	0.0075*** (0.000)
INSIDOWN	-0.0004*** (0.000)	-0.0004*** (0.000)	-0.0004*** (0.000)	-0.0003*** (0.000)
Net Income/ComEq	0.0000* (0.067)	0.0000** (0.025)	0.0001*** (0.007)	0.0000** (0.019)
Family	-0.0664*** (0.000)	-0.0705*** (0.000)	-0.0687*** (0.000)	-0.0455*** (0.000)
Cons	-0.1706*** (0.000)	-0.1812*** (0.000)	-0.2059*** (0.000)	-0.0713*** (0.002)
Obs	1668	1668	1668	1668
Instruments	107	107	107	107
Groups	200	200	200	200
AR (1)	-7.67	-7.69	-7.70	-7.74
[P-Value]	(0.000)	(0.000)	(0.000)	(0.000)
AR (2)	-0.19	-0.01	-0.22	-0.18
[P-Value]	(0.852)	(0.992)	(0.828)	(0.859)
Hansen test	107.33	107.47	104.88	108.70
[P-Value]	(0.222)	(0.220)	(0.275)	(0.196)
F-Significance	(0.000)	(0.000)	(0.000)	(0.000)

Note. *, **, ***= significance level at 0.10, 0.05 and 0.01 percent.

Table 9: Regression Results for Corporate Governance and Corporate Social Responsibility (Large Sample)

Variables	(1)	(2)	(3)	(4)
CSRS (-1)	0.08872*** (0.000)	0.9185*** (0.000)	0.8928*** (0.000)	0.8872*** (0.000)
CG-Score	0.0923*** (0.001)			
BRD-Score		0.0449** (0.047)		
AUD-Score			0.0968*** (0.000)	
DSC-Score				0.0482*** (0.000)
Debt/Assets	-0.0196** (0.026)	-0.0239*** (0.008)	-0.0227*** (0.006)	-0.0238*** (0.009)
FRAGE	0.0004 (0.588)	0.0003 (0.653)	-0.0003 (0.652)	-0.0003 (0.647)
GR	-0.0391*** (0.000)	-0.0446*** (0.000)	-0.0378*** (0.000)	-0.0282*** (0.000)
LnAssets	0.0147*** (0.000)	0.01791*** (0.000)	0.0148*** (0.000)	0.0116*** (0.001)
INSIDOWN	-0.0018*** (0.000)	-0.0020*** (0.000)	-0.0020*** (0.000)	-0.0019*** (0.000)
Net Income/Common Equity	-0.0000 (0.856)	-0.0000 (0.947)	-0.0001 (0.748)	-0.0001 (0.558)
Family	-0.0964*** (0.000)	-0.1096*** (0.000)	-0.0959*** (0.000)	-0.01050*** (0.000)
Cons	-0.1347*** (0.000)	-0.1532*** (0.000)	-0.1322*** (0.000)	-0.0499 (0.101)
Obs	434	434	434	434
Instruments	47	47	47	47
Groups	70	70	70	70
AR (1)	-4.24	-4.26	-4.24	-4.15
[P-Value]	(0.000)	(0.000)	(0.000)	(0.000)
AR (2)	0.66	0.95	0.80	0.41
[P-Value]	(0.507)	(0.340)	(0.422)	(0.680)
Hansen test	40.88	41.10	40.10	40.35
[P-Value]	(0.304)	(0.296)	(0.334)	(0.325)
F-Significance	(0.000)	(0.000)	(0.000)	(0.000)

Table 10: Regression Results for Corporate Governance and Corporate Social Responsibility (Medium Sample)

Variables	(1)	(2)	(3)	(4)
CSRS (-1)	0.8935*** (0.000)	0.9954*** (0.000)	0.9785*** (0.000)	0.9173*** (0.000)
CG-Score	0.1198*** (0.000)			
BRD-Score		0.0849*** (0.000)		
AUD-Score			0.0881*** (0.000)	
DSC-Score				0.0525*** (0.000)
Debt/Assets	-0.0079* (0.055)	-0.0107*** (0.004)	-0.0106*** (0.001)	-0.0105* (0.059)
FRAGE	0.0002** (0.018)	0.0005** (0.043)	0.0001 (0.499)	0.0001 (0.374)
GR	-0.0061* (0.061)	-0.0200*** (0.000)	-0.0129*** (0.000)	-0.0039*** (0.008)
LnAssets	0.0159*** (0.000)	0.0135*** (0.000)	0.0107*** (0.000)	0.0062*** (0.000)
INSIDOWN	-0.0002*** (0.000)	-0.0001** (0.031)	-0.0001*** (0.004)	-0.0001* (0.064)
Net Income/Common Equity	0.0005 (0.114)	0.0004 (0.225)	0.0005 (0.269)	-0.0000 (0.949)
Family	-0.0393*** (0.000)	-0.0232*** (0.000)	-0.0333*** (0.000)	-0.0116*** (0.007)
Cons	-0.1694*** (0.000)	-0.1689*** (0.000)	-0.1424*** (0.000)	-0.0224* (0.052)
Obs	835	835	835	835
Instruments	99	99	99	99
Groups	143	143	143	143
AR (1)	-5.36	-5.33	-5.32	-5.53
[P-Value]	(0.000)	(0.000)	(0.000)	(0.000)
AR (2)	-0.30	-0.22	-0.15	-0.41
[P-Value]	(0.767)	(0.827)	(0.879)	(0.682)
Hansen test	87.13	93.30	86.95	86.52
[P-Value]	(0.536)	(0.357)	(0.542)	(0.669)
F-Significance	(0.000)	(0.000)	(0.000)	(0.000)

Table 11: Regression Results for Corporate Governance and Corporate Social Responsibility (Small Sample)

Variables	(1)	(2)	(3)	(4)
CSRS (-1)	0.9049*** (0.000)	0.9381*** (0.000)	0.9479*** (0.000)	0.9341*** (0.000)
CG-Score	0.0584*** (0.000)			
BRD-Score		0.0297* (0.061)		
AUD-Score			0.0271*** (0.004)	
DSC-Score				0.0268** (0.016)
Debt/Assets	-0.0087** (0.049)	-0.0084* (0.057)	-0.0091** (0.036)	-0.0085** (0.049)
FRAGE	0.0002 (0.631)	-0.0001 (0. 851)	-0.0003 (0.415)	-0.0003 (0.546)
GR	-0.0069 (0.112)	-0.0048 (0.265)	-0.0034 (0.434)	-0.0018 (0.659)
LnAssets	0.0109** (0.013)	0.00770** (0.038)	0.0056* (0.075)	0.0067* (0.069)
INSIDOWN	-0.0003*** (0.001)	-0.0003*** (0.000)	-0.0002** (0.031)	-0.0003*** (0.001)
Net Income/Common Equity	0.0023*** (0.000)	0.0022*** (0.000)	0.0017*** (0.000)	0.0023*** (0.000)
Family	-0.1131*** (0.000)	-0.0892*** (0.000)	-0.0588*** (0.001)	-0.0666*** (0.000)
Cons	-0.1638*** (0.004)	-0.1090** (0.031)	-0.0648 (0.124)	-0.0601 (0.176)
Obs	398	398	398	398
Instruments	57	57	57	58
Groups	87	87	87	87
AR (1)	-3.45	-3.41	-3.42	-3.49
[P-Value]	(0.001)	(0.001)	(0.001)	(0.000)
AR (2)	-0.77	-0.76	-0.75	-0.79
[P-Value]	(0.440)	(0.447)	(0.454)	(0.430)
Hansen test	46.21	45.25	47.22	51.39
[P-Value]	(0.505)	(0.545)	(0.463)	(0.342)
F-Significance	(0.000)	(0.000)	(0.000)	(0.000)

4.3.1 Testing the Joint Effect of CG and Insider Ownership on CSR

This section provides a novel contribution by investigating whether CSR can be jointly determined by CG and insider's ownership. From the results given in Table 12, it can be seen that the coefficients on interaction terms $D_H \times D_P$ and $D_L \times D_P$ are negative and statistically significant in pooled regression. The result indicates that firms with a predominant shareholding are less involved in CSR engagement as compared to the base category of $D_H \times D_L$. Nevertheless, the coefficient of high CG group is higher as compared to the low CG category implying that high CG firms are more involved in social disclosure for the same level of predominant ownership. The CSR involvement of $D_H \times D_P$ group is lower by 0.02 from the base category of $D_H \times D_L$ and the $D_L \times D_P$ is lower by about 0.05. Although the difference between the $D_H \times D_P$ and $D_L \times D_P$ is 0.0343, this difference is statistically significant. Figure 2 shows the coefficients of interaction terms on Y-axis and insider ownership levels on X-axis for pooled sample. The blue line is high CG line and the red line is low CG line. The blue line is above the red line implying that high CG firms are more involved in social activities than low CG firms. However, there is no statistical evidence to say that $D_H \times D_M$, $D_L \times D_L$ and $D_L \times D_M$ are different from the base category of $D_H \times D_L$.

In case of large Cap firms, the results reveal that better governed firms have higher CSR disclosure when compared with lower CG firms controlling for the level of insiders ownership. As can be seen from Figure 3, the blue line (high CG line) is above the red line (low CG line). The coefficient of the interaction variables $D_H \times D_M$, $D_H \times D_P$, $D_L \times D_M$, and $D_L \times D_P$ are negative and statistically significant. However, firms in the high CG-medium ownership category disclose more information on CSR. Thus, the result indicates that CG alone is not sufficient to induce firms to provide more CSR information in annual report, both CG and ownership structure matters in influencing firms' choice of CSR engagement. Specifically, the result implies that high CG rank firms are more likely to be involved in CSR when insiders' ownership is in the range of 25% to 50%. Nonetheless, when insider ownership goes beyond 50% then CSR involvement decreases by 0.1316 as compared to the base category. Further, low CG firms have less CSR information in annual reports as compared to high CG firms. However, they still are able to disclose more when lower agency and entrenchment problem exists as in medium ownership category (25%-50%).

Further, for medium Cap firms, it can be seen that all low CG categories $D_L \times D_L$, $D_L \times D_M$, and $D_L \times D_P$ have lower coefficients as compare to the base category ($D_H \times D_L$). The results document that medium Cap low CG rank firms have lower CSR disclosure as compared to the base category. Furthermore, low CG firms with low or predominant ownership have lower CSR disclosure as compared to firms with medium ownership. However, $D_H \times D_M$ and $D_H \times D_P$ groups do not appear to be statistically different from the base category. For small Cap firms, the coefficient of interaction terms $D_H \times D_P$, $D_L \times D_P$, and $D_L \times D_L$ are negative and significant. Thus, the estimates suggest that high CG-predominant ownership group and low CG-predominant ownership group disclose

less CSR information as compared to the base category of high CG-low ownership category and the difference is 0.044 for $D_H \times D_P$ and 0.06 for $D_L \times D_P$. The low CG-low ownership category also discloses less CSR information than the base category by about 0.09.

Table 12: Regression Results for Joint CG-Insiders' Ownership and Corporate Social Responsibility

Variables	Model 2_Pool	Model 2_Large	Model 2_Medium	Model 2_Small
CSRS (-1)	0.9722*** (0.000)	0.8921*** (0.000)	0.9435*** (0.000)	0.9921*** (0.000)
BRD-Score	0.0567*** (0.000)	0.0309 (0.524)	0.0526*** (0.007)	0.0192 (0.681)
AUD-Score	0.0987*** (0.000)	0.0923*** (0.005)	-0.0018 (0.906)	-0.0027 (0.870)
DSC-Score	0.0250*** (0.000)	0.0297* (0.060)	0.0695*** (0.000)	0.0973*** (0.000)
Debt/Assets	0.0003 (0.536)	-0.0223*** (0.007)	-0.0143*** (0.000)	-0.0088** (0.017)
FRAGE	0.0002 (0.675)	-0.0005 (0.321)	0.0004 (0.323)	0.0005 (0.264)
GR	-0.0033*** (0.000)	-0.0315*** (0.001)	-0.0198*** (0.000)	-0.0019 (0.632)
LnAssets	0.0057*** (0.001)	0.0168*** (0.000)	0.0175*** (0.003)	0.0032** (0.034)
Net Income/CommEq	0.0002** (0.015)	-0.0001 (0.211)	0.0005 (0.108)	0.0023** (0.011)
Family	-0.0453*** (0.000)	-0.0433*** (0.000)	-0.0310*** (0.000)	-0.0654*** (0.000)
$\mathbf{D_H \times D_M}$	-0.0199 (0.655)	-0.0951*** (0.000)	-0.0019 (0.323)	-0.0345 (0.434)
$\mathbf{D_H \times D_P}$	-0.0154*** (0.000)	-0.1316*** (0.000)	-0.0134 (0.121)	-0.0439** (0.043)
$\mathbf{D_L \times D_L}$	-0.0016 (0.115)	-0.0116 (0.546)	-0.1113*** (0.000)	-0.0899*** (0.000)
$\mathbf{D_L \times D_M}$	-0.0231 (0.332)	-0.1642*** (0.000)	-0.1034** (0.012)	-0.0329 (0.787)
$\mathbf{D_L \times D_P}$	-0.0497** (0.044)	-0.2282*** (0.004)	-0.1327** (0.032)	-0.0619* (0.054)
Cons	0.0532 (0.283)	0.1142** (0.013)	0.0976*** (0.000)	0.1213** (0.024)

Obs	1668	398	835	399
Instruments	107	47	97	57
Groups	200	69	143	87
AR (1)	-7.62	-4.15	-4.78	-3.28
[P-Value]	(0.000)	(0.000)	(0.000)	(0.001)
AR (2)	-0.25	0.69	-0.22	-0.68
[P-Value]	(0. 803)	(0.491)	(0.645)	(0.496)
Hansen test	106.27	34.58	79.14	33.00
[P-Value]	(0. 131)	(0.440)	(0.546)	(0.838)
F-Significance	(0.000)	(0.000)	(0.000)	(0.000)

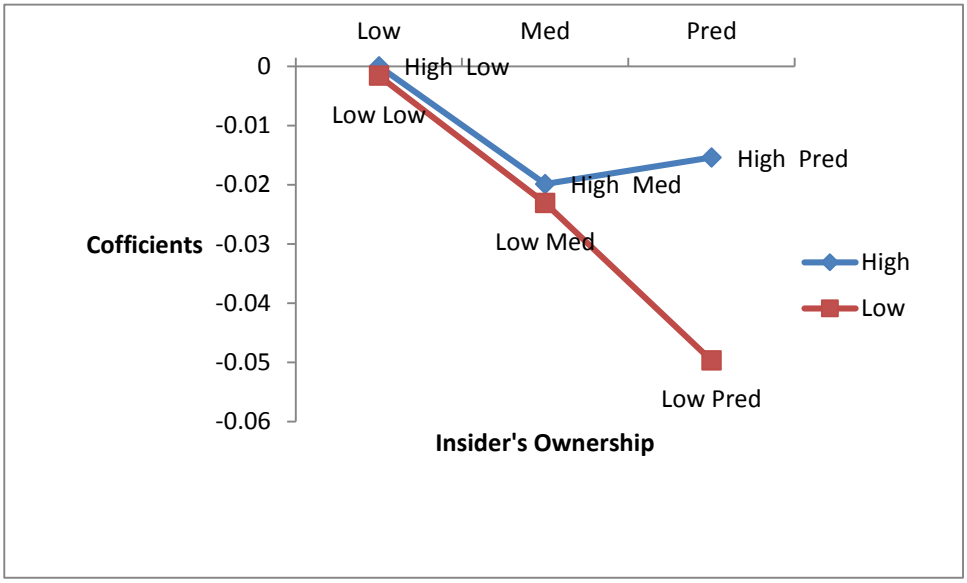

Figure 2: Coefficients of Joint CG and INSIDEOWN Interaction Variables on CSR (Pooled Sample)

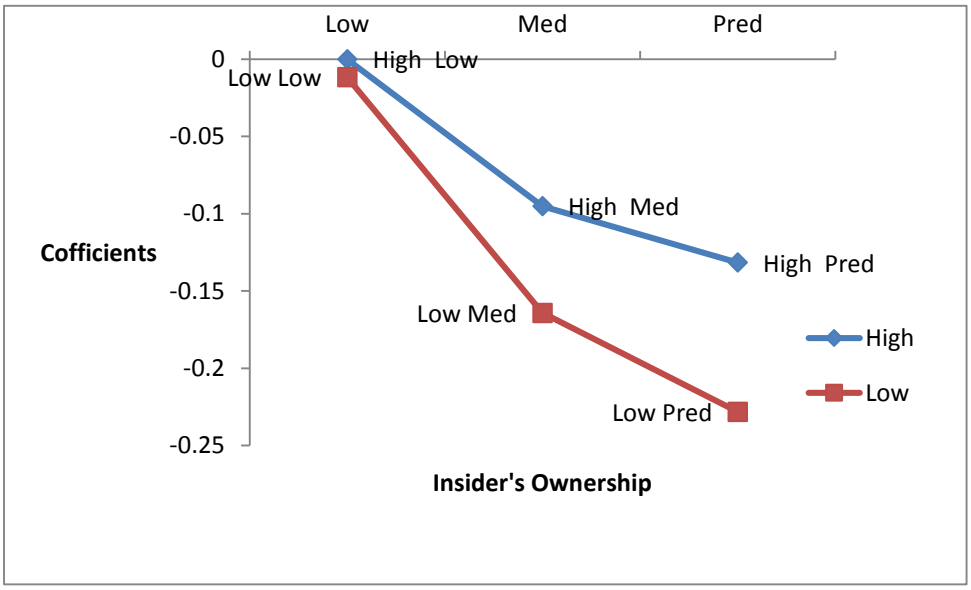

Figure 3: Coefficients of Joint CG and INSIDEOWN Interaction Variables on CSR (Large Sample)

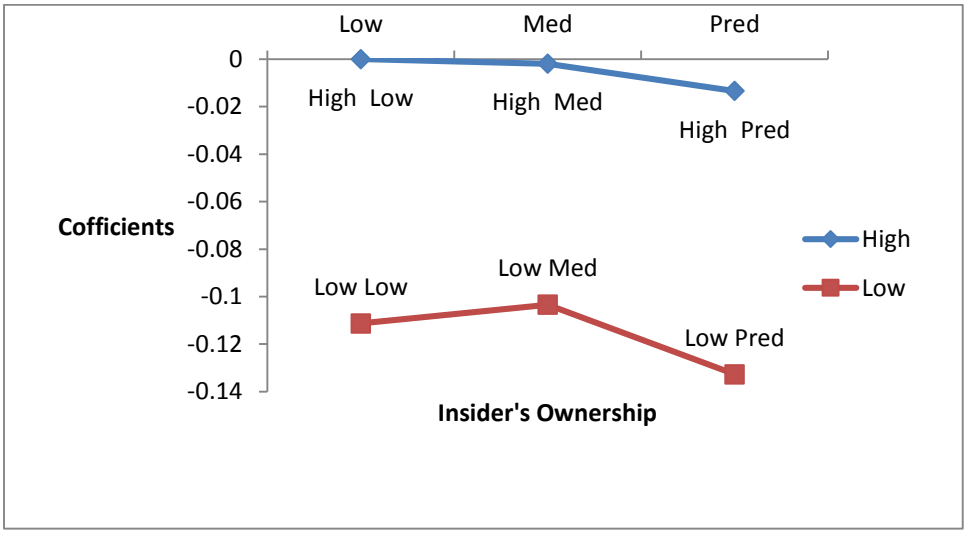

Figure 4: Coefficients of Joint CG and INSIDEOWN Interaction Variables on CSR (Medium Sample)

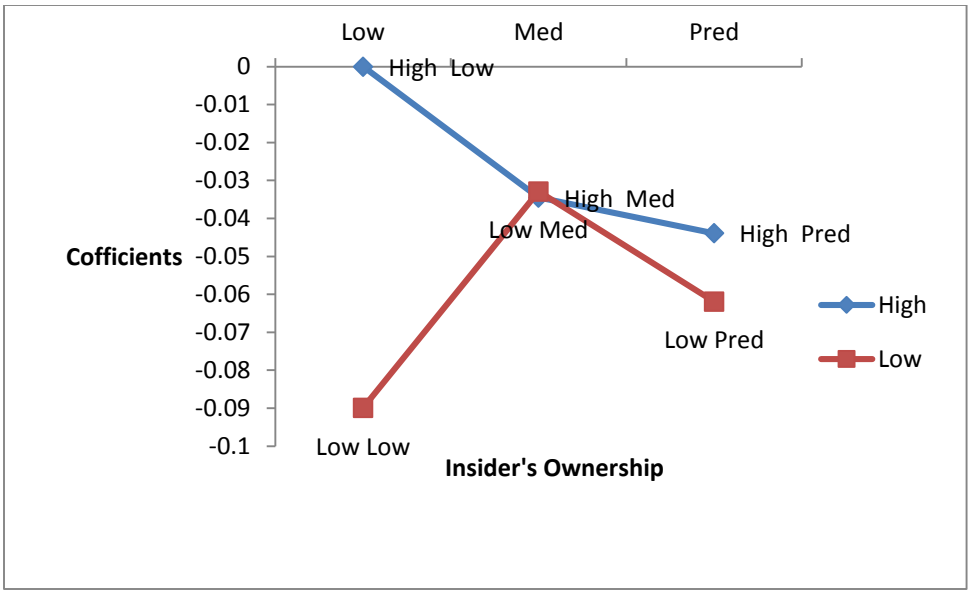

Figure 5: Coefficients of Joint CG and INSIDEOWN Interaction Variables on CSR (Small Sample)

4.4 Testing the Differences between CG of Small, Medium, and Large Firms

The study provides a novel contribution to the literature by separating the sample firms into three groups: large, medium, and small, to identify the differences in their CG structure. A one-way ANOVA was conducted to determine if the three groups differ in terms of their CG-score. The one-way ANOVA is shown in Table 13. The results reveal that the significance level is less than 0.05, indicating statistically significant difference in the mean CG-score between the three different groups. Hence, the results suggest that at least one of the group means is different from the other group means. Therefore, the Tukey-Kramer test is employed to know which groups are significantly different from each other. The results are shown in Table 14. The results document that there is a statistically significant difference in CG-score between the small Cap and medium Cap firms. Hence, the empirical results suggest that the CG score of small Cap firms differs from medium Cap firms. Similarly, a statistically significant difference is found between the large Cap and small Cap firms, and large Cap and medium Cap firms. In large firms, ownership tends to be more dispersed than smaller firms. Large firms stimulate the interest of a larger number of investors with more potential transactions business. Hence, in order to close the information gap, large firms would be expected to disclose more CG information than small firms, as they would have more resources (Bushman et al., 2004). On the other hand, small firms are usually characterized with a high level of insider ownership, and greater information asymmetry, because they are followed by fewer analysts (Cheung et al., 2005). From the information asymmetry point of view, small

firms with entrenched managers are expected to be less likely to enhance CG in annual reports to the outsiders.

Table 13: ANOVA Test of Mean Corporate Governance Score

Source of Variation	SS	df	MS	F	Prob > F	F *crit*
Between Groups	2.33861724	2	2.33861724	163.04	0.0000	3.317
Within groups	26.8080332	1868	0.014343517			
Total	29.1466505	1870	0.015586444			

Table 14: Tukey-Kramer Test of Mean Corporate Governance Score

CG-score Grp vs. Grp	Group Means	Mean Dif	Std. Err.	Tukey t P>|t|	TK-test	Tukey [95% Conf. Interval]
Small vs. Medium	0.4848 0.5397	0.0550	0.0066618	8.25 0.000	11.6682*	0.0393386 0.0705903
Small vs. Large	0.4848 0.6031	0.1183	0.0076965	15.37 0.000	21.7435*	0.1002812 0.1363868
Medium vs. Large	0.5397 0.6031	0.0634	0.0066666	9.51 0.000	13.4429*	0.0477326 0.0790066

4.5 Corporate Governance Determinants

In this section, the results are presented to investigate the factors that determine firm-level CG. The CG index is comprehensive. However, it lacks incorporation of ownership structure into its computations. Hence, to account for interdependence among various governance mechanisms, ownership structure is included in the regression models to complement the governance scorecard. The regression results are presented in Table 15. Debt/asset ratio (leverage) is found to be positively related to CG-score in medium and small sample firms. Managers are expected to be more intensely monitored by the debt-holders with a higher leverage ratio in the firm; hence may feel obliged to provide more about the firm's state of CG so as to put the debt-holders at ease. Further, consistent with the agency theory, firms with proportionally higher leverage are vulnerable to greater agency costs, which results in a positive association between leverage and CG. With particular relevance to CG, Suphakasem (2008) argues that providing more information can assure creditors that company can service the debt when the debt increases in relation to equity, and hence firms are likely to provide information for the purpose to assure creditors that they are effectively governed. On the contrary, there is no significant relationship found between leverage and $CG-score$ in pool or large Cap firms. This

could partly be attributable to the fact that, on average, the level of leverage in large Cap firms is lower as compared to small firms. This could lessen the need to reduce agency cost through CG.

The results indicate that firm-listing age is positively related to the level of CG and the result is statistically significant. The rationale for selecting this variable lies in the possibility that old firms might have improved their CG reporting practices over time. In particular, companies, which have been listed longer at the stock exchange, may want to provide more information on CG practices in order to distinguish themselves from the recently listed companies, which have lower quality CG practices. The variable LnAssets is found to be positive and significant in pooled, large, and small sample firms. This variable may be crucial due to the need to generate low cost capital. In relation to agency theory, large companies could have greater agency problems. Companies may benefit from providing more information to the public in order to reduce agency costs. The results suggest that large companies may have to provide additional information to fulfill the demands of professional investors.

The results further indicate a significant negative coefficient for insider ownership in pooled sample, and medium sample firms. This is consistent with the notion of agency theory that, within a firm with concentrated ownership, the owners tend to share the CG information with the insiders, and do not feel obliged to provide such information to the outsiders. The profitability of firms is positively related to firms' CG in case of pooled sample, large, and small sample firms. This suggests that in order to support endurance of their positions, remuneration, as well as to exhibit their ability to maximize the wealth of company shareholders and to signal institutional confidence managers will be motivated to provide more detailed CG information. In addition, profitability can be seen as a sign that companies are well-managed.

Finally, the coefficient on family in Model 3_Pool, Model 3_Medium, and Model 3_Small is negative and statistically significant. Closely held or family-based firms are usually secretive and tend to protect their own interests. Their exists litter separation between those who own and those who manage capital in countries where families have significant equity holdings, and companies seem to be less transparently governed and have less professional involvement. Therefore, due to better access to internal information capital owners do not have to depend largely on CG information to monitor their investments.

Table 15: Regression Results for Factors Influencing Corporate Governance

Variables	Model 3_Pool	Model 3_Large	Model 3_Medium	Model 3_Small
CG-score (-1)	0.8912*** (0.000)	0.9422*** (0.000)	0.9058*** (0.000)	0.9074*** (0.000)
Debt/Assets	0.0001 (0.945)	0.0045 (0.600)	0.0197** (0.011)	0.0023** (0.031)
FRAGE	0.0014*** (0.000)	0.0009*** (0.000)	0.0004*** (0.010)	0.0002** (0.028)
GR	0.0041 (0.165)	-0.0027 (0.429)	-0.0028 (0.522)	-0.0062 (0.126)
LnAssets	0.0039*** (0.000)	0.0077*** (0.000)	0.0005 (0.636)	0.0032** (0.039)
INSIDOWN	-0.0003*** (0.000)	-0.0001 (0.354)	-0.0005*** (0.000)	0.0001 (0.114)
Net Income/Common Equity	0.0000*** (0.000)	0.0000*** (0.001)	0.0000 (0.940)	0.0037*** (0.000)
Family	-0.0053* (0.094)	0.0066 (0.401)	-0.0089* (0.056)	-0.0269** (0.021)
Cons	0.0086 (0.337)	-0.0514*** (0.000)	0.0547*** (0.000)	0.0412*** (0.006)
Obs	1668	434	835	399
Instruments	154	108	92	51
Groups	200	70	143	87
AR (1)	-8.31	-4.02	-6.15	-3.95
[P-Value]	(0.000)	(0.000)	(0.000)	(0.000)
AR (2)	0.37	0.07	0.10	0.34
[P-Value]	(0.711)	(0.943)	(0.923)	(0.732)
Hansen test	165.79	64.19	98.57	51.48
[P-Value]	(0.114)	(0.997)	(0.117)	(0.150)
F-Significance	(0.000)	(0.000)	(0.000)	(0.000)

5. Conclusions

This paper aims to explore whether and how firm-level governance mechanisms affects CSR using a large sample of firms listed at the PSX. Further, the paper investigates the differential effects of CG on CSR across small, medium, and large firms. The findings strongly support to the hypothesis that CG alone is not sufficient to induce firms to

provide more CSR information. Rather, we show that both CG and ownership structure matters and have a vital role to play in firms' choice of CSR engagement. The results reveal that better governed firms have higher CSR disclosure when compared with lower CG firms controlling for the level of insider ownership. Specifically, the results suggest that firms are more likely to be involved in CSR when insiders' ownership is at medium level (25% to 50%) as compared to low (0 to 25%) or high level (>50%). Nonetheless, the estimates suggest that CSR involvement decreases when the insider ownership goes beyond the 50% level. Finally, the results reveal that there are significant differences in the effects of CG and other underlying empirical determinants of CSR across different sized firms.

5.1 Limitations and Avenues for Future Research

Although this paper significantly contributes to the existing literature by providing strong and robust evidence on the role of CG, ownership structure, and firm size in determining CSR, it has some limitations. The insider ownership thresholds of 0-25%, 25-50% and over 50% are arbitrarily selected to proxy for a firm's propensity to agency problems or entrenchment problems. Yet, this method of classification has been adopted in prior studies and is found appropriate in view of the actual position of insider ownership structure of the sample firms. The scope of the study is limited to public non-financial listed companies on Pakistan Stock Exchange. Future work could extend the research by using the financial listed companies or non-listed companies.

This research relies on one source of CG, the company annual reports. Hence, another avenue for future research is to examine other channels of CG, such as company websites and regulatory announcements. Examining such channels will help provide a complete picture about a company's CG. Future research should also be carried to explore the perceptions of stakeholders' on CG in Pakistan. The inclusion of new instruments like CEO tenure, intangible assets, and sustainability of business, capital structure, executive remuneration, and political regime could result in added edge and worth combinations of the internal CG mechanisms.

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Appendix 1: Corporate Governance Score/Index

A. Sub Index-Board Composition
Percentage of Independent Non-Executive Directors (INED's) on board
Presence of Independent Chairman
Size of board
Is the role of Chairman and CEO split?
Number of board meetings held during the year
Percentage of total director's attendance at board meetings
Percentage of board meetings attended by INED's
Minority shareholders representation on board
Gender diversity on board
Board and individual directors performance evaluation
B. Sub Index- Transparency and Auditing
Does the company have an audit committee?
What percentage of audit committee constitutes INED's?
Independence of audit committee Chairman
Whether a system is in place to protect whistle blowers
C. Sub Index- Disclosure
Does the company disclose board members biographies? does it list the other boards its directors sit on?
Policy for handling conflict of interest
Code of ethics for all directors and employees?
Attendance record of each director at committee meetings

Appendix 2: Corporate Social Responsibility Index

A. Community Involvement
Charitable donations
Support for housing (infrastructure)
Community program
B. Environmental
Policies related to environment
Pollution prevention
Recycling
C. Employee Information
Human resource
Relations with employees
Employees Welfare
Training and development of employees
Profit sharing with employees
Health and safety of workers
Child labour and related actions
Strong retirement benefits
D. Information Related to Product and Service
Types of products disclosed
Product research and development
Quality and safety of product
Customer service and satisfaction
Customer Award/Rating Received
Statement of value added