

## The antecedents of corporate social and environmental responsibility discourse in Pakistan: Multiple theoretical perspectives

**Muhammad Farhan Basheer**

*Universiti Utara Malaysia (UUM), Malaysia, Sintok, Kedah, Malaysia*

**Saqib Muneer**

*University of Hail, Hail, Saudi Arabia*

**Muhammad Atif Nawaz**

*The Islamia University of Bahawalpur, Bahawalpur, Pakistan*

**Zubair Ahmad**

*Bahauddin Zakariya University, Multan, Pakistan*

### Abstract

The primary purpose of the study is to explore the antecedents of corporate social and environmental responsibilities discourse practices in Pakistan. The industry sensitivity, government shareholding, block holder ownership, print media coverage, environmental monitoring programs, and strategic posture are examined as antecedents of corporate social and environmental responsibility practices. A multidimensional theoretical perspective namely stakeholder theory (ST), institutional theory (IT), agency theory (PAT), and legitimacy theory (LT) is used to conceptualize the phenomena. All the four of perspective theories (positive accounting theory, legitimacy theory, stakeholder theory, and institutional theory) claim that there are 'pressures' that impact the organization. How much 'pressures' are recognized, managed or satisfied differs from one perspective of theory to the other. To estimate the data, this study uses three sets of panel data models, i.e., the pooled ordinary least squares model (POLS) or constant coefficients model, fixed effects (FEM or least squares dummy variable/LSDV model) and random-effects models. The final sample is comprising of 173 firms over eight years from 2011 to 2017. The firms listed in PSX are included in the sample. Overall the findings of the study have shown agreement with the proposed results. However, the study has provided more support to the institutional theory and stakeholder theory.

**Keywords:** Corporate Social Responsibility, Stakeholders Theory, Agency Theory, Pakistan

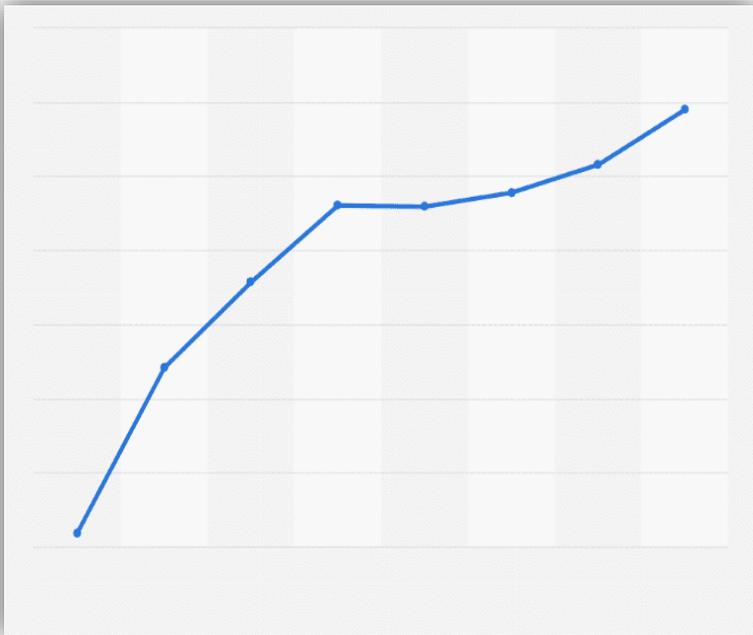
Several empirical researchers have developed unique academic literature on corporate social and environmental responsibility (CSER) practices (MURIITHI, 2016). The research provides diversified theoretical approaches that endorse the CSER practices, such as stakeholder theory (ST), institutional theory (IT), agency theory (PAT), and legitimacy theory (LT). The four previously discussed theoretical perspectives seem to be achievable since they were contradictory and challenging with conceptual overlaps. The idea of the theoretical lens has been reinforced by several CSER researcher's practices (Lu & Abeysekera, 2014; MURIITHI, 2016) as it involves various diversified perspectives. Thus, CSER is a complex phenomenon, such that no single theoretical perspective could cover it as a whole.

The perspective theories assert that organizations are influenced by specific pressures. However, the mechanism through which these pressures are perceived, handled or fulfilled vary from one perspective to the other (MURIITHI, 2016). According to Belkaoui and Karpik (1989), positive accounting theory or economic agency theory is a compelling theory that provides the foundation for CSER disclosure. The economic agency views an organization as a chain of agreements among various commercial agents that opportunistically function in the efficient markets. Therefore, in such context, CSER disclosure considers being meaningful for explaining the managerial compensation contracts, implicit political costs, or debt contractual obligations (O'Doherty et al., 2015). The agency theory is a principle which focuses upon the wealth-related agreements between the trading agents operating in the efficient markets and restrict the relevant scope of CSER to the preconceived target. Although, up to this point, such a number of force groups or potential users may fail to function in such markets Ali, Frynas and Mahmood (2017).

Alternatively, the legitimacy theory provides a broad CSER disclosure perspective, explaining that a business is undertaken by carrying out a social contract with their self-created

society. In such circumstances, the firm attempts to carry out diverse socially desired functions after approval from the civil society (Lokuwaduge&Heenetigala, 2017) and receiving benefits and support for its existence. Given Murray, Skene and Haynes (2017), the CSER disclosure perspective mostly appears from the legitimacy theory. Therefore, the CSER disclosure perspective can be viewed as an instrument for validating sustained organizational existence.

The stakeholder theory presents a clear understanding of the stakeholders' expectation effects on the CSER disclosure policy. According to stakeholder theory, expansion of organizational disclosure can be taken as a tool for managing the required information needed by the stakeholder groups, such as employees, shareholders, investors, NGOs, customers, and public authorities. This CSER disclosure is used by managers for effective handling of powerful stakeholders, and to get support for staying in the market. In addition, the scholar stated that the external pressures are explained as pressures arising from the affected stakeholders, or from those who can affect the functioning of an organization. Such pressures appear when stakeholders have the power, importance from the organization, urgency, and authenticity to influence the company (Schnackenberg& Tomlinson, 2016). Alternatively, the institutional theory explains the way organizations respond to the institutional operations, and in what ways the unselected organization's performance could appear and persist by adopting the convention, custom, social obligation, or convenience. Thus, providing a different perspective on the relationship between environment and organization. Generally, organizations implement five different strategies such as avoidance, compromise, approval, manipulation, and challenging, depending on the nature and degree of pressure and following the institutional environment. Thus, in view of Granovetter, (2018). external pressure refers to the pressure for making adjustment and for staying in order with the institutional organizations. the industrial waste is one of the most important issues in Pakistan. It is evident that the carbon emission for industrial purposes has increases during last few years and continuously increasing.



*Figure 1: Carbon dioxide emission for industrial purposes from Pakistan (2011-18)*  
*Source: US Environmental and energy services*

Assessing social, environmental, and corporate behavior is the important feature which make these theories significant. However, theories with similar perspective can be jointly used in a study, for instance, even though the political theories can explain the industries but they could coordinate at various level of information across industries as well as countries, for further clarification regarding the contract (Luo, Tang & Peng, 2018). According to Luo at al. (2018), the CSER drivers can be clearly understood through detailed analysis of CSER disclosure, using multi-paradigm or multi-theoretical perspective. However, multi-paradigm research is the type of research which uses

a number of theories from different social paradigms (Setyorini, 2015). In other words, instead of using different lenses for similar world, the researchers consider the same event with varying paradigms in this research. A multi-paradigm approach was used by Yakovleva (2017) in which they incorporated a system-oriented framework, which integrated the three theories in their study, namely stakeholder theory, legitimacy theory, and political economy theory. The study revealed that CSER is related to the size of industrial and company profits. Such a combination of different theories provides ideal framework to explain the CSER determinants. A study Orij (2012) investigated whether society determines the level of corporate social disclosure. The theoretical framework for present research is the combination of legitimacy theory, institutional theory, and stakeholder theory. A sample size of 200 was selected covering listed firms. The system-oriented framework employed for this study is appropriate to explain the association between company characteristics and levels of corporate social disclosure. However, Yakovleva (2017) stated that the problem might emerge if these theories are viewed not as complementary but competitive theories. Thus, no existing conceptual frameworks are found to be capable of thoroughly explaining the CSER drivers.

### **Hypotheses Development**

Prior studies Murwaningsari (2019) have indicated that CSER practices may differ depending upon the time and nature of industries. Various industries and industry features have scientifically proved that such CSER disclosure influences the benefits and relative costs of organizations (Luo et al. 2018; Qiu, Shaikat, &Tharyan, 2016). This thesis aims to discuss all the analyzed explanatory factors.

### **Industry Sensitivity**

Several empirical types of research (Ali et a. 2017) have provided empirical evidence that CSER disclosure is affected by industry. However, specific sectors were found to be vulnerable to the voters' lobbying activities (Villiers et al., 2014). Besides, corporate annual reports provide managers the opportunity to act in a socially responsible manner. Therefore, such statements serve as the primary mean for sharing information from the managers to the shareholders (Villiers et al., 2014). A few sectors are likely to be influenced by higher environmental effects and criticism of pressure groups. Murwaningsari (2019) stated that sensitive industries, including oil, chemicals, gas, paper, and pulp, tend to be more prominent in the natural environment as compared to the less environmentally sensitive sectors, i.e., leisure, retail, insurance, and banking. Prior studies have suggested that firms that are negatively contributing to the environment are the ones who support CSER disclosures more as compared to the environment-friendly industries (Murwaningsari, 2019). Based on the institutional theory perspective, it has been argued that during uncertainty, firms tend to imitate the more successful firms, who have credibility for undertaking a specific practice (Granovetter, 2018). Such that, morethe sensitive industry firms tend to reveal more environmental and social information, since their operations involve greater risk as compared to less sensitive companies. Thus, leading to following hypothesis:

**H1:** A positive association exists between a firms' industry sensitivity and its level of CSER disclosure.

### **Environmental Monitoring Program**

Organizations are required to function in a socially responsible manner to ensure social legitimacy towards society and to acquire a good reputation, thereby obtaining a right to operate in the industry (Järvenpää & Lämsiluoto 2016). This indicates that these organizations react in response to the changes in societal expectations. In an empirical study, the potential effects of governments, lobby groups, or pressure sources on the company's CSER disclosure was investigated (Platonova et al. 2018). The study reported that the huge effects on the environmental and social activities of companies generally come from the community, government, insurers, consumers, lobby groups, shareholders, media, suppliers, and banks. A few researchers, Depoers and Jérôme (2017) examined the relationships among environmental and social responsibility of a company and membership changes in the social and ecological activist groups. These studies also supported the legitimacy theory perspective, i.e. shaping, managing, and manipulating the public perception through CSER disclosures. Successful creation of public opinion takes place when the public observes the shared information. Therefore, all firms selected for the assessment of the environmental impact of government programs will be more visible and prominent as compared to non-selected firms. Yakovleva (2017) also mentioned that such selected companies are required to share their environmental commitment and progress regularly, in the form of annual reports. The studiesWidarto and Mudjiyanti (2015)attempted to analyze the association among CSER disclosure

and environmental training programs of the Pakistan government i.e. the Program for Pollution Control, Evaluation and Rating (PROPER). Thus, the following hypothesis is proposed:

**H2:** A positive association exists between firm following environmental monitoring program and its level of CSER disclosure.

### **Print Media Coverage**

Numerous researchers Ali et al. (2017) have suggested that companies generally adopt CSER disclosures to overcome the negative effects arising from public policy. The researcher examined what role media play in publishing news regarding a particular firm, using a legitimacy theory perspective. The study concluded that more excellent the media coverage for environmental and social activities, the more will be the public attention and public policy's stress level upon the company. Thus, media has the power to influence the perception of the community, particularly on environment-based issues. Previous studies have also mentioned the dominant role played by media to affect public agenda. Several studies Basuki and Patrioty (2018) also attempted to examine the association among CSER disclosure and mass media pressure and reported that significant association exists between CSER disclosure and mass media pressure. Therefore, the study hypothesizes as follows:

**H3:** A positive association exists between a firm's CSER disclosure level and its print media coverage.

### **Block holder Ownership**

In prior studies, the researchers such as Ahmadi and Bouri (2017) who employed stakeholder perspective have incorporated Ullman model for the hypothesis testing. The measures which determine the stakeholder power and its information requirements may interpret the required type and level of CSER disclosures. Another study Jitree (2015) analyzed the CSER disclosure level of 110 Australian companies', by assessing their 1995's annual report content. By incorporating Ullman's three dimensional-framework, the study regressed the CSER disclosure's quantity and quality with the chosen variables. Except for economic performance, the significant association has been found for strategic posture, and stakeholder power. The stakeholders of a company have been classified into three groups namely, creditors, shareholders, and government (Ahmadi & Bouri 2017; Jitree, 2015), where creditors are the ones who provide economic strength and money to the company; whereas the shareholders or a group of stakeholders are the primary capital providers; and the government, which intervenes in the company operations through regulations and laws. The shareholders' widespread dispersion determines the range of CSER disclosure be used as a strategic plan for acquiring new investors (Appiah et al. 2016). The ownership dispersion among investors increases the pressure of CSER disclosures. According to Ahmadi and Bouri (2017), the block holder or ownership concentration level is determined with the shareholders' percentage, i.e., having a total share of 5% or above. Blockholder ownership refers to the 91% ownership of ordinary shares by the influential shareholders, i.e., 5% shareholding or above (Hussain, Rigoni, & Orij, 2018).

Moreover, giving more CSER disclosure requires less monitoring, thereby minimizing the agency problem. The study reported a negative association between CSER disclosure and block holder ownership. The Pakistani studies Sumilat and Destriana (2017) also reported a negative association between CSER disclosure and block holder ownership. Thus, the following hypothesis is proposed:

**H4:** A negative association exists between a firm's CSER disclosure level and its blockholder ownership.

### **Strategic Posture**

Strategic posture is another aspect of Ullman's framework (1985). It shows the way the company responds to CSER disclosure demands. Companies who use active posture tend to implement social responsibility programs and share their environmental commitment in the form of their annual reports. Furthermore, in order to influence stakeholders, the companies continuously monitor their position and status through social responsibility adoption (Ahmadi & Bouri 2017). Companies also monitor and manage their relationship with stakeholders to achieve optimal interrelationship among the stakeholders (Liu, 2015). In a study, Jitree (2015) also employed two proxy measures for determining the strategic posture, namely; 1) existence of environmental or social committee, and 2) the environmental and social responsibility recognition in the vision or mission statement. They also mentioned that some companies remain unwilling to share CSER disclosure in their vision or mission statement. A similar thing was observed in case of the existence of social or environmental committees a few companies may be willing to disclose while others may not. Therefore, environmental and social responsibility disclosure in the vision or

mission statement of annual report is a better measure. According to institutional theory perspective, normative isomorphism appears when a firm has definite CSR related goals; for instance, it is the company's goal which explains the way it should act accordingly (Bonsón&Bednárová, 2015). With the stated goal, the managers also act in a socially responsible manner and share it in the annual report. A Pakistani study examined the impact of strategic posture, environmental performance, and stakeholder power on the CSER disclosure. Thus, this study proposed the hypothesis as follows:

**H5:** A positive association exists between firm exhibiting strategic posture and its level of CSER disclosure.

### **Government Shareholding**

A government is an essential and powerful stakeholder that needs to be satisfied by the management. The stakeholder theory suggests that the government's power as a stakeholder is indicated by its enforcement mechanism. The socially responsible actions of a firm are adopted to reduce those interventions of government, which could influence the value of an organization. Although, firms having a relationship with the government tend to use more voluntary disclosure as compared to independent firms (Hussain et al., 2018). Thus, there exists a significant association between CSER disclosure and government ownership.

Furthermore, establishing CSER disclosures minimize moral hazards as well as agency problems in a company. The coercive isomorphism is positively associated with the stakeholder theory of management. According to the stakeholder theory, a company adopts voluntary disclosure to consider the social, environmental, ethical, economic, and stakeholders' concerns which can significantly influence the firm's operations. Specific influential stakeholders persuade or informally force firms to incorporate voluntary reporting activities (Lokuwaduge&Heenetigala, 2017). Therefore, government regulation is appeared to be a political pressure, which could significantly influence the actions of a company. Thus, companies are motivated to adopt CSER disclosure to reduce the effects caused by political forces. The CSER disclosure practices should not be adopted by companies, in order to align the demands and expectations of influential stakeholders. In a study attempted to examine the impact of profitability and government ownership on the company's CSER disclosure. They concluded that government ownership found to have a significant effect on the CSER disclosure. Therefore, the study hypothesized as:

**H6:** The firm's government shareholding is positively associated with its CSER disclosure level.

### **Measurement and Data**

To measure the level of CSER disclosure, this study uses content analysis. Content analysis is a method of codifying the text into different groups according to the criteria used. This method was chosen because of its ability to analyze various types of communication tools, including in the written mode. Thus, content 115 analysis can be replicated and have a valid conclusion from the context of the selected criteria. According to Rosen et al., (2018) content analysis allows a company to undertake CSER disclosure more systematically, can be classified and compared as well as useful in determining trends.

A U.S. non-governmental organization and the Environment Program of the United Nations have formed a joint initiative of the Coalition for a Sustainable Economy by launched the GRI in 1997. This initiative is structured to develop a reporting framework that is accepted globally to improve the quality, accuracy, and usefulness of sustainability reporting (Initiative, 2006). Transparency, inclusiveness, auditing capabilities, completeness, relevance, sustainability context, accuracy, neutrality, comparability, clarity, and timeliness are critical principles of GRI. The principles can be used to ensure that the sustainability report presents a fair and balanced picture of the performance of the economic, environmental and social. This principle can also facilitate the comparisons between the company's disclosures over time and is believed to address social and environmental issues to their key stakeholders (Qiu et al., 2016). The index used in this research consists of 74 disclosure items with 178 items score where 146 scores are related to hard disclosure and 32 scores of soft disclosures. The disclosure index consists of 11 categories, from A1 to A11. Hard environmental disclosures are represented in A1- A6. The soft social and environmental exposures are represented in A7-A11.

To capture the extent of CSER in an objective manner using the combination of Qiu et al., (2016), five testable dimensions of research are conducted. The five dimensions consist of theme, location of social and environmental reporting, amount, evidence, and time frame, A dummy variable is used to designate companies from these industries, with the following criteria, one (1) if the company's industry is more sensitive to the environment, and zero (0) if the industry is less sensitive to the environment. This practices also done by previous studies in CSER area (Ali et a. 2017).

This study uses print media articles related to environment related to measuring the degree of media pressure, such as research conducted by Ali et al. (2017). In this study, the level of blockholder ownership is measured by the percentage of shareholders who own 5% or more of the total shareholding. This method is similar to the method used by Ahmadi and Bouri (2017) in the measure block holder ownership. The measure of control variables are taken from the studies of Basheer (2014), Basheer, Khan, Hassan, and Shah (2018), and Basheer, Siam, Awn, and Hassan (2019).

**Panel Data Estimation And Econometric Model**

The final sample is comprising of 173 firms over the period of 8 years from 2011 to 2017. The firms listed on the Pakistan stock exchange before the 2008 and having age more than 10 years and leverage value less than one are included in the sample.

The panel data analysis in the current study is started with the pooled OLS. The random effects model (REM) is employed if the differences across the entities (countries, individuals, etc) have some effects on the dependent variable. The RE assumes that variation across entities is random and uncorrelated with the predictor variables. In other words, the entity’s error term is assumed to be uncorrelated with the predictor variables, and permits the inclusion of time-invariant variables such as race, culture, etc., in the model like any other independent variables. But these variables are absorbed by the constant term in the FEM model. In using the REM, one is expected to specify the individual characteristics which might or might not affect the predictor variables. However, some variables might be unavailable, resulting in omitted variable(s) bias in the model. Fortunately, with the REM conclusion can be generalized beyond the sample employed in the model.

Fixed effect model (FEM or LSDV) has the following characteristics: having different intercepts for individual observations but assumes the equal slope and have a constant variance between individuals, groups, and institutions. The difference is due to the specific features of each unit together with management style or managerial philosophy (Iqbal & Molyneux, 2016). Fixed effect model estimated by least squares dummy variable (LSDV) regression (OLS with a set of dummies) and using effects estimation method. Thus, the primary benefit of the fixed effects model (FEM) when using panel data analysis is to estimate the effect of independent variable on the dependent variable, while controlling for the influence of unobserved variables REM could avoid the loss of degrees of freedom when compared with FEM. The influence of group and time are more common in panel data. In conclusion, the differences in the intercept of the entire group or time assumed in FEM, while REM investigates differences in error variance. The FE model is specified as:

$$Y_{it} = \beta_0 + \beta_1 X'_{it} + \beta_2 Z_{it} + \epsilon_{it} \dots\dots\dots (1)$$

Let

$$\alpha_i = \beta_0 + \beta_2 Z_{it} \dots\dots\dots (2)$$

Putting the value of equation (3) in equation (1)

$$Y_{it} = \alpha_i + \beta_1 X'_{it} + \epsilon_{it} \dots\dots\dots (3)$$

Here  $\alpha_i, \alpha_1 - \alpha_n$  it represents the individual-specific intercept/entity fixed effect. The test is validated using standard F-test. Where,

$$H_0 : \alpha_1 = \alpha_2 =, \dots\dots\dots = \alpha_n$$

$$H_1 : \alpha_1 \neq \alpha_2 \neq, \dots\dots\dots \neq \alpha_n$$

If F-statistics is below 5 percent, we will accept the null hypothesis and eject otherwise. The insignificant F-statistics value indicates that  $\alpha$  is not constant.

Therefore, the following equation (4) standard fixed effect model will be considered.

$$Y_{it} = \alpha_i + \beta_1 X'_{it} + \lambda_2 DZ_i + \lambda_3 DZ_{2i} + \lambda_n DZ_{ni} + \epsilon_{it} \dots\dots\dots(4)$$

The random effects model (RE) is employed if the differences across the entities (country, firm, industry, person, etc.(Javed& Basheer, 2017; Basheer et al., 2019; Hidhiir et al., 2019) have some effects on the dependent variable. The RE assumes that variation across entities is random and uncorrelated with the predictor variables. In other words, the entity ‘s error term is considered to be uncorrelated with the predictor variables and permits the inclusion of time-invariant variables such as race, culture, etc., in the model like any other independent variables. But these variables are absorbed by the constant term in the FE model. In using the RE, one is expected to specify the individual characteristics which might or might not affect the predictor variables (Basheer et al., 2019). However, some variables might be unavailable, resulting in omitted

158 variable(s) bias in the model. Fortunately, with the RE conclusion can be generalized beyond the sample employed in the model can absorb time-invariant variables. The model is depicted in equations (5) underneath.

$$Y_{it} = (\alpha + \nu_i) + \beta_1 X'_{it} + \varepsilon_{it} \dots\dots\dots(5)$$

Where represents individual-specific error component

$$Y_{it} = \alpha + \beta_1 X'_{it} + (\nu_i + \varepsilon_{it}) \dots\dots\dots(6)$$

Putting  $\mu_{it} = (\nu_i + \varepsilon_{it})$  in equation (7)

$$Y_{it} = \alpha + \beta_1 X'_{it} + \mu_{it} \dots\dots\dots(7)$$

Testing the presence of heterogeneity using the Lagrange Multiplier (LM) test will validate the test.

$$H_0: \delta \nu^2 = 0$$

$$H_1: \delta \nu^2 \neq 0$$

If the null hypothesis is rejected, then random effect exists and vice versa  
 To decide between random effect and fixed effect, the Hausman test will be conducted to test whether the regressors are correlated with the unique errors in the model.

**H<sub>0</sub>**: Random effects are consistent and efficient

**H<sub>1</sub>**: Random effects are inconsistent and inefficient that, the fixed effect is consistent and efficient.

If the Chi-square  $\chi^2$  probability value is significant, the null hypothesis will be rejected, and the fixed effect model will be more consistent and efficient.

We started our analysis from general to specific and has developed an aggregate model comprising of all the factors leading to six models explaining the relationship of each of the elements on CSER. The equation 8 below is solving the effect of all the factors namely IS, ENMP, PMC, BHO, SP, and GSH on the CSER, keeping the Leverage, size, liquidity, and performance as control variables.

$$CSER_{it} = \alpha_0 + \alpha_1 IS_{it} + \alpha_2 ENMP_{it} + \alpha_3 PMC_{it} + \alpha_4 BHO_{it} + \alpha_5 SP_{it} + \alpha_6 GSH_{it} + \alpha_7 LEV_{it} + \alpha_8 SIZE_{it} + \alpha_9 LIQ_{it} + \alpha_{10} PERF_{it} + \varepsilon_{it} \dots\dots (8)$$

The hypothesis 2 to hypotheses 5 are econometrically explained in equation 9, 10, 11, 12, 13, and 14 respectively

$$CSER_{it} = \alpha_0 + \alpha_1 IS_{it} + \alpha_2 LEV_{it} + \alpha_3 SIZE_{it} + \alpha_4 LIQ_{it} + \alpha_5 PERF_{it} + \varepsilon_{it} \dots\dots\dots (9)$$

$$CSER_{it} = \alpha_0 + \alpha_2 ENMP_{it} + \alpha_2 LEV_{it} + \alpha_3 SIZE_{it} + \alpha_4 LIQ_{it} + \alpha_5 PERF_{it} + \varepsilon_{it} \dots\dots\dots (10)$$

$$CSER_{it} = \alpha_0 + \alpha_3 PMC_{it} + \alpha_2 LEV_{it} + \alpha_3 SIZE_{it} + \alpha_4 LIQ_{it} + \alpha_5 PERF_{it} + \varepsilon_{it} \dots\dots\dots (11)$$

$$CSER_{it} = \alpha_0 + \alpha_4 BHO_{it} + \alpha_2 LEV_{it} + \alpha_3 SIZE_{it} + \alpha_4 LIQ_{it} + \alpha_5 PERF_{it} + \varepsilon_{it} \dots\dots\dots (12)$$

$$CSER_{it} = \alpha_0 + \alpha_5 SP_{it} + \alpha_2 LEV_{it} + \alpha_3 SIZE_{it} + \alpha_4 LIQ_{it} + \alpha_5 PERF_{it} + \varepsilon_{it} \dots\dots\dots (13)$$

$$CSER_{it} = \alpha_0 + \alpha_6 GSH_{it} + \alpha_2 LEV_{it} + \alpha_3 SIZE_{it} + \alpha_4 LIQ_{it} + \alpha_5 PERF_{it} + \varepsilon_{it} \dots\dots\dots (14)$$

### Results

We have started our analysis with the Asteriou and Hall (2015) unit root test to analyze the stationary properties of our considered variables. The IPS test finds the unobserved heterogeneity among the cross-sections and also eliminates the issues of serial correlation. The IPS unit root test has the best properties to judge the problem of a unit root in the small sample. The desirable results for unit root tests include that the variables should be non-stationary at the level and become stationary at the first difference. The findings have proved that the variables are non-stationary at primary difference. The correlational analysis of the variables is shown in table 1. The correlation value indicates that all the variables used in the current study are highly correlated. The results confirm there is no issue of multicollinearity.

Before proceeding to the regression analysis, the authors have conducted a series of diagnostic tests to decide the best estimate and to evaluate the data. The results of the test confirm that there are no signs of autocorrelation and heteroskedastic in our panel. In this study various diagnostic checking has been conducted on the model. The analyses include the Breusch and Pagan Lagrangian Multiplier test (BPL) for random effects and Hausman specification test. This test determines which estimator either random effect or fixed effect is more appropriate. Another important test conducted is Variance Inflation Test (VIF) for multicollinearity. This is used to detect multicollinearity problems among the variables.

Similarly, Wald test for heteroskedasticity was also been conducted. Wald test for the heteroskedasticity assess the difference between restricted and the unrestricted model

Table 1. Correlation analysis

	1	2	3	4	5	6	7	8	9	10	11	
CSER	1	1										
IS	2	0.18	1									
ENMP	3	0.22	0.14	1								
PMC	4	0.28	0.11	0.89	1							
BHO	5	0.14	0.43	0.11	0.05	1						
SP	6	0.13	0.28	0.08	0.66	0.08	1					
GSH	7	0.22	0.29	0.12	0.49	0.33	0.37	1				
LEV	8	0.30	0.30	0.32	0.12	0.43	0.17	0.32	1			
SIZE	9	0.43	0.45	0.40	0.32	0.54	0.45	0.74	0.43	1		
LIQ	10	0.30	0.30	0.32	0.34	0.76	0.29	0.23	0.53	0.57	1	
PERF	11	0.32	0.29	0.21	0.29	0.52	0.34	0.30	0.39	0.42	0.34	1

The first stage of panel data analysis requires the researcher to prove that the REM is significant and that the variance is not zero (0). This validity assumption signifies that the model contains an unobserved effect (Kassie et al., 2018). If the criteria are not met (variance is zero), then the REM is not appropriate (Gujarati & Porter, 2015). In that case, the constant variance model is valid and would provide superior results. The Lagrangian Multiplier test provides the answer to determine the significance of the chi-square for the REM (Breusch & Pagan, 1980). Meanwhile the fixed effect is preferred over random effect and pooled OLS. The results of diagnostic tests are shown in table 2.

Table 2. Diagnostic Tests

Model	Statistics	Breusch and Pagan test/ autocorrelation test	White test	Heteroscedasticity	Hausman test
Equation 8	Prob>chi2	0.0000	0.0000**		0.0014
	Prob>z				
Equation 9	Prob>chi2	0.0000	0.0000**		0.0321
	Prob>z				
Equation 10	Prob>chi2	0.0000	0.0000**		0.0202
	Prob>z				
Equation 11	Prob>chi2	0.0000	0.0000**		0.0820
	Prob>z				
Equation 12	Prob>chi2	0.0000	0.0000**		0.0032
	Prob>z				
Equation 13	Prob>chi2	0.0000	0.0000**		0.0430
	Prob>z				
Equation 14	Prob>chi2	0.0000	0.0000**		0.0832
	Prob>z				

Following the information from the diagnostic test we have performed the regression analysis and the results are presented in table 3. Industry Sensitivity is in a significant positive relationship with the CSER disclosure. The findings of the study are in line with the proposition of institutional theory and is in line with the prior studies (Yakovleva, 2017; Campopiano & Massis, 2015), have suggested that firms that are negatively contributing to the environment are the ones who support CSER disclosures more as compared to the environment friendly industries.

The findings if the study reveals the fact that the environmental monitoring program is a significant determinant of CSER disclosures. The results are consistent with the prior studies also supported the legitimacy theory perspective, i.e. shaping, managing, and manipulating the public perception through CSER disclosures. The print media coverage is appeared to be a key driver of CSER in Pakistan, and the findings are in line with the prior results (Basuki & Patrioty, 2018; Hartatiti et al., 2018).

**Table 3. Regression results**

	Equation 8	Equation 9	Equation 10	Equation 11	Equation 12	Equation 13	Equation 14
IS	0.432***	0.436***					
ENMP	0.091***		0.110***				
PMC	0.821***			0.801***			
BHO	-0.098***				-0.110***		
SP	0.672***					0.601***	
GSH	0.231**						0.245***
LEV	0.562**	0.581***	0.567*	0.514**	0.571***	0.509***	0.532**
SIZE	0.672***	0.602***	0.611**	0.651**	0.671**	0.701***	0.609***
LIQ	0.023**	0.0341*	0.0821***	0.0352**	0.0430*	0.002*	0.020**
PERF	0.782**	0.733***	0.730***	0.721***	0.691***	0.682***	0.691***
R <sup>2</sup>	0.82	0.62	0.70	0.54	0.73	0.78	0.84

Blockholder ownership is in a significant negative relationship with the CSER disclosures. The study is providing support to the proposition of agency theory, which argues that giving more CSER disclosure requires less monitoring, thereby minimizing the agency problem. The study reported a negative association between CSER disclosure and block holder ownership. The strategic posture and government ownership appeared in a positive and significant relationship with CSER disclosure. This has provided support to institutional theory and stakeholder theory. Overall the findings of the study have shown agreement with the proposed results.

### Discussion and Conclusion

Coercive isomorphism also has a relationship with the managerial branch of stakeholder theory. Based on the administrative branch of the stakeholder theory point of view, a company will use voluntary disclosure to keep the economic, social, environmental, and ethical values as well as concerns of the stakeholders who have high power over the company. Usually substantial influential stakeholders will force the companies (informally) to adopt the voluntary reporting practices. Linnenluecke (2017) apply coercive isomorphism to government selection on accounting procedures. Certain institutional rules are determined by the power of government. Then, the companies, which have government ownership, would be easier to get resources, for example, credit markets. Companies that have significant government investments normally have a government representative appointed as a director. Under government control, the directors have some influence to make certain decisions such as align the company's aspirations. With the representatives of these directors in similar industries and with the connections to the government, it would be more politically visible. Consequently, companies will be exposed to scrutiny not only by governments but also by other interested parties. Therefore, with the imposition of government ownership, the dynamics of field coercion comes into play (Setyorini, 2015).

All four of perspective theories claim that there are 'pressures' that impact the organization. How much 'pressures' are recognized, managed or satisfied differs from one perspective of theory to the other (MURIITHI, 2016). Economic agency theory (or PAT) turns out to be an exciting proposition as a basis for CSER disclosure. Luo et al. (2018), claimed that agency theory emphasizes on monetary or wealth deliberations among agents who trade in the efficient markets and limits the scope of relevant CSER from its intended purpose. So far, in such markets, these many potential users (e.g., force groups) of this material may not act (Ali et al. 2017). Legitimacy theory gives a broad perspective on CSER disclosure. This perspective can explain that the business is guaranteed by a social contract with the society they create. In this case, the company decides to perform various socially desired actions in return for civil society's approval over company's activities, and they will get other benefits and ultimately ensure their existence (Lokuwaduge&Heenetigala, 2017). argued that most of CSER disclosure perspectives come from the use of legitimacy theory perspective. This means the perspective of CSER disclosure can be seen as a way to legitimize the continuing existence of a company to the public.

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