

CAPITAL UNIVERSITY OF SCIENCE AND
TECHNOLOGY, ISLAMABAD



**Determinants of Corporate Social
Responsibility Disclosure and Its Impact
on Investment Behavior of Firms: The
Case of China and Pakistan**

by

Rehana Anwar

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**Determinants of Corporate Social Responsibility
Disclosure and Its Impact on Investment
Behavior of Firms: The Case of China and
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This thesis is dedicated to the loving memory of my mother. A strong and gentle soul who taught me to trust God, believe in hard work and that so much can be done with little.



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List of Publications

It is certified that following publication(s) have been made out of the research work that has been carried out for this thesis:-

1. Anwar, R., & Ahmed, J. (2020). "When does Corporate Social Responsibility Disclosure affect investment efficiency? A new answer to an old question". SAGE Open, Vol. 10(2), pp. 1-14. doi:<https://doi.org/10.1177/2158244020931121>.
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Abstract

In the light of growing global awareness, there is an increasing pressure on firms to participate in Corporate Social Responsibility activities. However, owing to the voluntary nature of sustainability activities, the respective decision to adopt or not could be affected by the firm specific features and motives and preferences of owners or directors on corporate boards. In contemporary literature relationship of various characteristics of firm, governance and ownership with CSR disclosure has been explored; but mixed results have been obtained. This study aims to fill this literature gap by examining the determinants of CSR disclosures in China and Pakistan. The sample consists of 396 and 220 firms from China and Pakistan respectively for a period of nine years (2009-2017). CSR disclosure quantity and quality indices are developed for Pakistani firms to arrive at reliable results. Employing Linear regression analysis the results show that firm size, profitability, indebtedness, board independence, institutional ownership and family ownership are the significant determinants of CSR disclosure quantity and quality of Chinese firms. For Pakistani firms the significant determinants found were firm size, profitability, indebtedness, board independence, board size, multiple directorships, political connectedness and family ownership.

Furthermore, with regards to financial implications the prior evidence, that firms investment efficiency is positively affected by its CSR disclosure leaves unaddressed whether all kinds of disclosure have the same effect or not. Drawing on stakeholder theory and employing cross-sectional logistic regression model to test the hypothesized association, the results imply that firms high (low) quality disclosure regarding their engagement in CSR activities increases their chances of being from the investment efficient (inefficient) group. The obtained results conclude that CSR reporting activity is not beneficial for companies unless a meaningful disclosure of sustainability information is made. This study contributes to the scarce evidence on CSR reporting in China and Pakistan and provides a useful method for assessing quality of CSR reports. This study provides evidence of significantly different effect of CSR disclosure targeted towards primary vs. secondary stakeholders on firm-level investment efficiency. The findings of our research work hint that if

CSR activities are made strongly connected to primary stakeholders then such activities may not only benefit stakeholders but also extend increase in shareholder wealth. However, any such participation in social issues beyond the interest of primary stakeholders may adversely impact on firms capabilities enhance shareholder wealth.

Keywords: CSR Disclsoure, Agency Theory, Stakeholder Theory, Primary and Secondary Stakeholders, Disclosure Quality, CSR Disclosure Determinants, China, Pakistan.

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Abbreviations

AA	AccountAbility's
ABX	Abu Dhabi stock exchange
CCG	Code of Corporate Governance
CEO	Chief Executive Officer
CG	Corporate Governance
CoP	Communication on Progress
CSMAR	China Stock Market and Accounting Research
CSR	Corporate Social Responsibility
CSRC	China Securities Regulatory Commission
CSRCP	Corporate Social Responsibility Centre Pakistan
DJSI	Dow Jones Sustainability Indices
EBIT	Earning Before Interest and Taxes
ESG	Environmental, Social and Governance
FTSE	Financial Times Stock Exchange
GRI	Global Reporting Initiative
GSI	Global Sustainability Index
HSE	Health, Safety and Environment
IASB	International Accounting Standards Board
IFRS	International Financial Reporting Standards
IR	Integrated Reporting
ISO	International Organization for Standardization
KLD	Kinder, Lydenberg, Domini
KPMG	Klynveld Peat Marwick Goerdeler
NEDs	Non-Executive Directors

NGO	Non-Governmental Organizations
NPV	Net Present Value
OHSAS	Occupational Health and Safety Assessment Series
PSX	Pakistan Stock Exchange
PwC	Price Waterhouse and Coopers & Lybrand
RESET	Ramsey Regression Equation Specification Error Test
RKS	Rankins
SA	Social Accountability
SECP	Securities and Exchange Commission of Pakistan
SI	Sustainability Index
UK	United Kingdom
UNGC	United Nations Global Compact
US	United States
VIF	Variance Inflation Factor
WWF	World Wide Fund

Chapter 1

Introduction

In recent times the increased awareness regarding global warming, and corporate scandals related to social and environmental corruptions has brought the corporations in to the spotlight (Yang, Ngai & Lu, 2020). The media and general public now expect from companies to show socially responsible behavior and share the sustainability related information with their stakeholders as well (Lucchini & Moissello, 2017). Hence, due to increasing public concerns, Corporate Social Responsibility (hereafter CSR) has become strategic business agenda in many countries around the globe. From the last few decades, especially after Global financial crisis of 2007, world has witnessed a significant growth in disclosure by companies related to their CSR performance. In the light of growing global awareness, there is an increasing pressure on firms to participate in and report on CSR activities. CSR disclosures comprise of explanation on firms' participation and spending on community related projects, providing safe working environment to the workers employed by the firms, describing the products and services offered by the firms and last but not the least information regarding steps taken by firms to protect environment. The objective of corporations to only earn financial profits and focusing on financial aspects of business in the past has now shifted to keeping a positive corporate reputation in the market in order to win favors of various stakeholders (Ghazali, 2007). There are different functions of CSR disclosure including assessing how effective is firm's CSR project, improving corporate reputation in the market, measuring its sustainability impact.

Companies report on their sustainability activities for various reasons. First one is to tackle the pressure from outside forces like governments, society or investors etc. These firms engage in CSR related projects because they believe that not disclosing will lead to decreased profitability and reputation. Firms use CSR disclosure as a legitimacy instrument to exhibit their socially responsible behavior to their stakeholders in a bid to improve their performance as well as reputation and to maintain good relations with their stakeholders. Second reason behind reporting on CSR performance is to gain a competitive advantage. These firms believe that CSR disclosure leads to good terms with their stakeholders which ultimately improves their performance, makes them a preferred choice for employees and helps them in developing valued intangible assets. However, owing to the voluntary nature of sustainability activities, the respective decision to adopt or not could be affected by the motives and preferences of firms.

CSR is a broad concept, which is hard to summarize in one definition but the CSR definition used throughout this thesis is “Company’s verifiable commitment towards engaging in economically, socially and environmentally sustainable operating practices that is transparent and increasingly satisfying for its broad range of stakeholders”. Stakeholder in this study is defined as the party that is positively or negatively affected by the company’s actions or decisions. Stakeholders of CSR can be customers, employees, investors, business partners, unions, suppliers, regulatory authorities, governments, local communities, and private organizations.

CSR is broadly distributed in social, economic and environmental areas. The first step with regards social responsibility is to adhere to the laws and show compliance to the international agreements dealing with human rights. Similarly, the companies need to take care about local customs and prevailing codes of conduct. The firms should be extending economic support for development and taking initiatives for social welfare in the community. The companies should display a firm commitment bearing social responsibility in all of their corporate activities. The economic responsibility refers to the agreement of a company in following rules and regulations in accordance to law and serving its stockholders to the best. The economic responsible behavior of companies results in development of local

businesses, which leads to improved innovative productivity, rational trade and poverty reduction. CSR also demands for companies to adopt measures which ensure controlling any direct or indirect harmful effects caused to environment, as a result of their operations.

The efforts are now being made to develop business models, integrated with social needs in order to ensure the compliance of social responsibility obligations on part of companies. Numerous national and international guidelines, standards, indicators, code of conduct and indices on CSR are available for corporations to assist them in preparing, implementing and communicating their sustainability performance. There are over 200 rules or principles of CSR, whereas important ones include SA 8000, AA 1000, ISO26000, Global Reporting initiative (GRI), Caux Principle for business, Accountability's AA1000 Standard, Global Sullivan principles, UN Global Compact (UNGC). Moreover, from late 90s world has witnessed a substantial growth in the number of indices (commonly called "benchmarks"), with the goal to evaluate corporations against a CSR framework. Some of the popular indices are Sustainability Index (SI) by Dow Jones, CSR Index by Calvert Fund and FTSE4Good by FTSE. There are primarily two aims behind indices developed by financial institutions. Firstly, being a benchmark for companies involved in CSR work. Secondly, the CSR indices provide the necessary support which responsible investors need in order to integrate ESG factors (Environment, Social, and Governance) in their investment decisions. Some well-known worldwide CSR indices are Dow Jones Sustainability Index series (DJSI), FTSE4GOOD series and KLD Global Sustainability Index Series (GSI) etc.

From last few decades CSR is the point of focus both in academic studies and in practice. Various scholars target to improve the understanding of performance management by exploring the determinants of CSR and impact of CSR on corporate performance (Chen & Lee, 2017; Gong & Ho, 2018; Hasan & Habib, 2017; Hu, Zhu, Tucker, & Hu, 2018). However, majority of the literature is from developed industrialized economies and replicability of these results in developing economies is lacking. Though some efforts are made to map out the CSR landscape of emerging economies but they fall insufficient in comparison to the coverage of developed

economies in the literature. This study attempts to fill this void in CSR literature by providing a deep insight in to the sustainability reporting practices of firms from developing economies. Specifically, the objective of this study is to identify the determinants of CSR disclosure by examining the sustainability related information provided by the firms and its impact on investment efficiency of companies.

The management should undertake all the value enhancing options of investments because Investments in these projects significantly benefit the firm. However, firms are bound by scarce resources which confine the management to go after these indefinite opportunities. The management of a firm has the authority over allocating capital between competitive investment opportunities. If this capital is assigned in a competent way then it leads to corporate investment efficiency which paves the way for economic efficiency and sustainable growth for the corporation. As firms future relies upon its investment efficiency, it is assumed that the capital will be employed as optimally as possible with least wastage. It is included in the fiduciary duty of firm management that they should critically assess the investment opportunities at hand and opt for the one that is the most value enhancing for the firm. Nevertheless, the literature shows that management sometimes fail to assign the funds efficiently (Jensen & Meckling, 1976). Management tends to misuse the funds by either under-investing funds by foregoing profit-making investment projects, or, over-investing by undertaking the unprofitable opportunities. This over and under investment of corporate funds lead to investment inefficiency. Empirical and theoretical literature has identified main reasons behind inefficient investments as information asymmetry and agency conflicts (Jensen & Meckling, 1976). Information asymmetry between management and shareholders significantly impacts the cost of obtaining funds from the market and hence project selection. In general, socially responsible firms are committed to higher-quality accounting disclosure (Ferrero, Sanchez, & Ballesteros, 2015) which leads to lower financial risk (Benlemlih & GirerdPotin, 2017; Dai, Lu, & Qi, 2019) and provide easy access to finance (Snchez, Miranda, David, & Ariza, 2019). CSR literature shows that socially responsible companies have comparatively more convenient competitive positions (Porter & Kramer, 2006). Therefore, recent studies argue for an existence of some level of association between investment efficiency

and CSR (Benlemlih & Bitar, 2018; Bhandari & Javakhadze, 2017). There is substantial evidence that CSR disclosure raise the overall information level (Cho, Lee, & Pfeiffer, 2013) that consequently reduces information asymmetry between management and stakeholders which benefits them financially (Botosan & Plumlee, 2002). However, not all firms choose to make such disclosures and the disclosures that are made are of varying quality. In this study, a deep analysis is presented that augments the long ongoing debate on financial implications with regards CSR involvement of firms. This study argues that high quality CSR disclosures by firms are viewed as meaningful representation of a firm's CSR policy and hence reduces information asymmetry, which positively impacts its investment efficiency. Whereas, low quality disclosures are considered as disingenuous and ingratiating attempt (Godfrey, 2005) and do not improve investment efficiency. Reason being, low disclosure quality fails to reduce information asymmetry which is a reason for economic frictions, and this consequently leads to investment inefficiency in firms. Investment efficiency is very crucial to the operations of a company so it is important to recognize the influence CSR disclosure has on it.

The majority literature disregard the distinction between quantity and quality of disclosure. Previous studies have measured CSR disclosures by assigning a dichotomous scale to index categories where primarily the presence or absence of information was recorded. Whereas, disclosure literature shows that reporting quantity is not an adequate proxy for disclosure quality (Rezaee & Tuo, 2019). Therefore, this concern is addressed by developing a separate CSR disclosure quality index for Pakistani market and using RKS ratings to represent CSR disclosure quality for Chinese firms and comparing the results when disclosure is of high quality with the results when disclosure is sub-standard. Previous literature suggests that quality disclosure by firms has the potential to affect investment efficiency of the firm positively (Hope & Thomas, 2008; McNichols & Stubben, 2008) by reducing the chances of adverse selection (Lambert, Leuz, & Verrecchia, 2007) and improving corporate control mechanisms which prevents managers from expropriating investors' wealth (Fama & Jensen, 1983). Moreover, following Hillman and Keim (2001) this study argues that better relationships with primary stakeholders such as customers and employees will result in the development of intangible

and valuable resources that can be a source of competitive advantage which increases shareholder wealth. This study hypothesizes a heterogeneous influence of CSR disclosure with different targeting stakeholders on the CSR disclosure and investment efficiency link. Since customers are not always willing to pay for social measures that companies take hence companies face the dilemma of choosing between the dimensions of CSR to include in their CSR profile. This raises the question of which area should a company be focusing in its CSR policy profile to get maximum benefit out of it. A large sample from China and Pakistan is used and after controlling for all the determinants of investment efficiency it is evident that CSR actions targeting primary stakeholders affect investment efficiency differently than secondary stakeholders and that low quality disclosures doesn't improve investment efficiency.

China and Pakistan are unique settings for this study because they have no mandatory requirement for CSR disclosure as other developed countries, thus choice of such companies to make disclosures can have significance for improving investment efficiency. Moreover, studying such a problem in emerging markets is more interesting due to existence of agency problems and information asymmetry which mainly prevail in developing markets because of low investment protection and poor regulations with regard disclosure policy.

The situation hints that CSR disclosure and its quality can play a considerable role in handling the issues of information asymmetry and agency problems, which can ultimately improve Chinese and Pakistani firm's investment efficiency. Even though, Chinese and Pakistani markets have low level of deliberate data exposure, lesser coverage of financial media, poor monitoring by financial analysts, and due to absence of alternative source of available information it is generally expected that CSR disclosure would considerably improve the firm's investment efficiency. Moreover, earlier studies have suggested that most of companies in developing markets have concentrated proprietorship arrangement (Claessens & Fan, 2002), and this leads to lower call for high quality information and greater agency complications and hypothetically verifies the association of investment efficiency and CSR disclosure quality.

1.1 CSR in China

China has witnessed tremendous growth over the years after following "reform and open-door" policy that was introduced in 1978. According to World Bank's Annual Report 2011, China has progressed with an average GDP of 10.3% in 1980s and 9.6% in 1990s, respectively. Such a phenomenal growth led to various environmental and safety issues. Numerous issues and scandals were surfaced, where mal practices were observed in industrial manufacturing, compromising the health and safety measures. Sanlu Group milk powder scandal in 2008 is one of such cases which received the wide attention around the globe.

Thereafter, the public awareness and concerns with regards CSR begin to spread in masses. Social responsibility was started to be considered as a mandatory aspect for sustainable economic development, where government, large enterprises and society at large stepped forward consciously to handle the situation. Apprehending the growing concerns, Chinese government formulated laws and regulations on CSR practices, whereas stock exchanges in China also issued guidelines for CSR roles, expected to be delivered by companies.

CSRC (China Securities Regulatory Commission) and the State Economic and Trade Commission started encouraging all companies to take the interests of all stake holders on board with regards environmental protection and social welfare in 2001. Later in 2005, companies were required to observe certain social responsibilities to comply with well accepted business and social morality.

With the increasing awareness on CSR, State-Owned Assets Supervision and Administration Commission of the State Council (SASAC) asked government-owned enterprises to formally develop a reporting system to ensure dispensation of mandatory CSR information. SASAC further regulated the affair of CSR reporting through providing instructions and performance indicators to help companies report CSR issues.

With the passage of time stock exchanges also played their role for highlighting the importance of CSR and providing a legal framework to ensure companies report the CSR disclosures. In 2006, Shenzhen Stock exchange (SZSE) presented social

responsibility instructions, which urged the listed companies to disclose CSR reports along with annual reports. Similarly, Shanghai Stock Exchange (SHSE) provided a set of guidelines to all listed companies, requiring reporting non-financial information focused on environmental and social aspects. In continuation of same efforts for ensuring better level of CSR disclosure, SZSE and SHSE, both obligated a subset of listed companies to formally submit CSR reports having clear information on CSR measures in addition of annual reports, in 2008.

China introduced its first environmental regulations in 1974, in line with United Nations' initiative of 1972 on the subject; however these regulations also lack instructions on disclosures. Thus, there were no compulsory obligations in annual reports on the part of companies as per contemporary rules and regulations to extend CSR disclosure, beside some implicit obligations referred by.

Similarly, the CCG (Code of Corporate Governance), which was enforced in 2002, asks the listed Companies in China to arrange the disclosures keeping in consideration the stakeholders such as other creditors, consumers, interest of banks, suppliers, employees, communities etc. These stakeholders were provided the information with regards social and environmental indicators but they had no legal ground to inquire for specific or detailed information, besides what has been disclosed by companies.

In short the rules and regulations are not adequate enough, they require companies to take CSR measures but what level of information should be disclosed, a specific set of guidelines are yet to be developed in this regard. The benefits of disclosing CSR information is indeed beneficial with many aspects and it extends great benefit to stakeholders but it does not stand mandatory in Chinese disclosure legal system.

1.2 CSR in Pakistan

The legal and institutional structure of Pakistani market supports to manage the social responsibility of firms towards different stakeholders. Such kind of laws and regulations include

- Law against bonded labor which includes slavery and child labor as well (Article 11).
- Facility of safe working environment from the employer (Article 37e).
- Prohibition of gender discrimination on work place (Article 25-2).
- Safeguarding the rights of environment and consumer (Article 9a).
- Liberty to form employee unions and groups (Article 17), to name but a few.

These laws are implemented by different institutions and agencies working in the country in the relevant quarters. These laws ensure that corporations follow these laws but they do not bound firms on disclosing information regarding these issues to the general public. With regards disclosure the legal framework comprises of IFRS (International Financial Reporting Standards), Companies Ordinance 1984 and CCG. These laws require firms to follow proper financial reporting standards, maintain proper accounts and ensure protection of minority shareholders. All these requirements of information disclosure for companies are supervised by SECP (Securities and Exchange Commission of Pakistan). The regulatory framework of Pakistan chiefly targets the disclosure of financial information by the firms but ignores the reporting on CSR issues. In this regard the General Order by SECP requesting firms to report on their social and environmental activities was the first step taken in 2009. The Order just summaries some general outlines that may be disclosed by a firm in its annual report to share its social and environmental performance. This Order instead of identifying a specific format for reporting CSR information as in the case of financial disclosure gave a general outline which does not make firms accountable to stakeholders as in the case of financial reporting.

This shows that the legal framework of the country support the idea that corporate sector has a social responsibility towards environment and community but the law enforcement of such regulations is weak. In the environment of weak law enforcement, the corporate sector is unlikely to obey the rules with regards to CSR in Pakistan. Linking this to CSR reporting, in the presence of weak law enforcement in the country, it is expected that firms ignore the gist of the regulation

that encourage the firms to report on CSR. The General Order requires firms to disclose general social and environmental information rather than specifying some particular indicators to report on like GRI (Global Reporting Initiative) guidelines. Hence the General Order of 2009 gives a leeway to firms in disclosure of CSR information that leads to inconsistent CSR reporting among corporations in Pakistan.

1.3 Research Gap

During 70's and 80's, research from developed economies is dominant in CSR literature with predominance of UK, US, Australia & New Zealand (Gurvitsh & Sidorova, 2012) which is one of the motivations behind this study. CSR was considered to be a Western phenomenon for the reason that developed countries have implemented procedures e.g., CSR Indices and standards, to encourage companies to practice CSR. However, we can clearly observe a dearth of such regulation, laws and policies in developing economies especially South Asian region. Studies have proved that CSR is multifaceted and complex concept and established it as a country specific notion (Matten & Moon, 2008), making it exciting to explore in South Asian context. Examining South Asian markets for CSR activities, identifying its determinants as well as financial implications and comparing it would give us a clear insight in to the change of CSR orientation with the change in institutional and cultural settings.

Although, there exist a plethora of research on CSR disclosure but South Asian region and specifically China and Pakistan have received a very modest attention in this regard, which is one of the motivations behind this study. Developing countries have different regulations and socio-economic conditions as compare to the developed world and even though CSR disclosure is not mandatory in China and Pakistan but still companies provide information to their stakeholders regarding their CSR performance (Sharif & Rashid, 2014). Despite some progress in corporate disclosure on social and environmental activities, China and specially Pakistan still lags behind in the South Asian region (Sajjad & Eweje, 2014).

Even the few studies which are done on developing markets suffer from unreliable results because of different issues. One of them being the small or partial sample size for example the study of Malik and Kanwal (2018) analyzed only pharmaceutical sector of Pakistan which had only eight listed firms thus the sample was too small to generalize the results to the whole market. Similarly, Majeed, Aziz, and Saleem (2015) used word count as a proxy of level of CSR disclosure which is not an appropriate method according to CSR literature (Unerman, 2000). Therefore the above mentioned studies used either inappropriate methods to formulate CSR index or inappropriate sample size which raise a question on their reliability and generalizability. Whereas, this study uses a large sample of 396 firms from China and 220 firms from Pakistan; and a more appropriate method of developing CSR disclosure index. This study develops separate indices for CSR disclosure quantity and quality for Pakistani market due to unavailability of any CSR rating mechanism in the country and uses the CSMAR (China Stock Market and Accounting Research) rating as a proxy for CSR disclosure quantity and RKS (Rankins) ratings as a proxy for CSR disclosure quality, which will identify the level and quality of CSR disclosure amongst the selected economies.

The findings regarding the determinants and financial implications of Pakistan is compared with China because of somewhat similar institutional settings of both the countries.

1.4 Problem Statement

The implementation of CSR disclosure is weak in developing countries as compared to the developed ones despite of its significant role in helping the listed companies grow and to overall economic development of the economies. A plausible reason behind this can be that corporate sector of developing countries does not see CSR disclosure as an investment that can pay back to the firms financially. Therefore, the part CSR reporting can play in benefiting the firms in China and Pakistan remained less explored and even less well understood. There is a vast literature available on developed countries regarding the determinants and consequences of

CSR reporting but very few have been undertaken in developing countries like China and Pakistan. Moreover, there is also very limited literature available that can help firm management in assessing CSR reporting and understanding its influence on firms investment efficiency through playing a role in increasing information symmetry in the market. Taking this in to account, the study will inspect the determinants of CSR disclosure in Chinese and Pakistani listed firms, while also examining whether CSR reporting impact the investment efficiency of firms. Moreover, this study will inspect in detail how CSR disclosure quality impacts the investment efficiency of firms and in particular what dimensions of CSR disclosure has more positive impact on investment efficiency.

1.5 Research Questions

The study of determinants and implications of CSR disclosure has gained great interest from academic researchers. These links need to be studied more in developing countries perspective because as pointed out by institutional theory the developing markets are very different in comparison to developed markets. Due to different institutional settings it is interesting to study the determinants of CSR disclosure quantity and quality. Moreover, separately studying the impact of CSR disclosure quantity and CSR disclosure quality on investment efficiency of firms will contribute to the literature of developing markets in a unique way. Agency theory contends that generally when the corporations are not bounded by law to report on their CSR activities, they opt for disingenuous and ingratiating reporting just to fulfill the formality in the eyes of stakeholders. So it would be interesting to study whether such a deficient reporting brings similar financial benefits for corporations as a good and serious effort to report on sustainability performance by firms does. For this purpose two separate indices are developed to measure the CSR disclosure quantity and CSR disclosure quality of Pakistani firms and two separate databases are employed to represent the CSR disclosure quantity and CSR disclosure quality of Chinese firms. Chinese and Pakistani corporate sectors are gradually adopting socially responsible business practices; nevertheless, some

of the companies still show slow progress in this regard because of various reasons like lack of understanding, no bonding by any regulatory organization etc. Furthermore, examining the differing impact of CSR disclosure categories on financial performance of firms is also expected to be different from the developed markets on which most of the CSR literature is focused on because of different cultural settings. These differing impacts will contribute to stakeholder theory from developing markets perspective.

For the above mentioned reasons further investigations on the topic is needed and for this examination the following research questions are formed which would be answered after the empirical analysis.

1. What are the determinants of CSR disclosures in listed companies of China and Pakistan?
2. Does CSR disclosure quantity affects investment efficiency of listed companies in China and Pakistan?
3. Does CSR disclosure quality affects investment efficiency of listed companies in China and Pakistan?
4. Do the implications on investment efficiency the same for high and low quality CSR disclosures by the listed firms of China and Pakistan?
5. Do the implications on investment efficiency the same for CSR disclosures targeted towards primary vs. secondary stakeholders by the listed firms of China and Pakistan?

1.6 Objectives of the Study

The primary objectives of this research are to

1. Investigating the determinants of CSR disclosure in China and Pakistan.
2. Investigating the impact of CSR disclosure on investment efficiency of firms in China and Pakistan.

3. Developing CSR disclosure quantity index which incorporates the effect of not only the breadth of information but also the depth of information to arrive at reliable results.
4. Development of CSR disclosure quality index which incorporates the quality of CSR information provided by the firms.

1.7 Significance of the Study

This study contributes uniquely to the literature as this kind of comprehensive study has never been conducted in the region of China and Pakistan. This study develops a framework of determining factors comprising of firm specific features, governance structure and ownership structure which are anticipated to be affecting the sustainability disclosure. The findings and conclusions of this study considerably contribute towards the understanding about CSR disclosures in these countries. Furthermore, there exists no elaborative study as such, which discusses CSR disclosure quality and its comparison between different countries, thus this research work provides an improved framework exposing the insights of CSR disclosure determinants and consequences, in different countries under different circumstances. Additionally, the descriptive statistics obtained as a result of this study also helps in studying various trends associated with CSR disclosures in selected countries. The findings of this study helps companies enhance their understanding and implementation of CSR strategies and employing CSR actions in a bid to improve the overall business performance. Moreover, regulatory authorities with objectives to mandate the CSR disclosure in annual reports would find these results helpful. The results would help the authorities identify the unmet targets of their policies. The aim of legalization of CSR reporting is to encourage firms to be more socially responsible by contributing towards the environment and society and reporting on such projects to all the stakeholders. Our results will portray a true image whether the forces present in the market are adequate enough to motivate corporations to be socially responsible or a mandatory regulation is required to push firms in this direction.

The results would add to CSR literature by providing an improved understanding of theories used in literature as a motive of firms behind practicing CSR disclosure. The theories employed and tested in this study are stakeholder theory, agency theory, legitimacy theory and institutional theory, providing the basis for CSR reporting in Chinese and Pakistani context.

This study makes a significant methodological contribution by developing a customized CSR disclosure quantity and quality indices for Pakistan which can be used by future researchers as well to quantify CSR disclosures. These indices with few modifications can be employed by future researchers to study CSR disclosures in other developing markets where an expert professional rating of firms regarding their CSR reporting is not available.

The findings of this study would foster the quality of research in the area of CSR disclosure in Chinese and Pakistani context. Specifically, it is intended to enhance the understanding of different features that influence CSR disclosure in these markets. Moreover, it is expected to contribute significantly in CSR literature by providing a deep insight in to the relationship between CSR disclosure and investment efficiency of firms.

1.8 Summary of Chapter

This chapter explains the notion of CSR and CSR disclosures and various transitions this concept went through since its origin. The research gap in the literature is identified and research objectives and questions are formulated. The chapter also explains how CSR disclosure can impact the investment efficiency of firms. Various contributions of this study to the literature as well as the policy making institutions are explained. In the end the summary of this thesis is elaborated with the structure of the thesis.

Chapter 2

Theoretical Background and Hypotheses Development

2.1 Introduction

This chapter is centered on review of past CSR disclosure studies. The chapter is divided in to eight sections; first section introduces the chapter, the importance of quantity and quality of disclosure is explained in the second section. The context of this study is set in the third section. Review of past studies on finding the factors impacting CSR reporting, development of the hypotheses is presented in fourth section. The fifth section presents the past literature concerning CSR disclosure and investment efficiency, and hypotheses development. Finally, the last section summarizes this chapter.

2.2 Narrative Disclosures and CSR

Generally the section of annual reports presenting the narrative disclosure is considered as a very vital mean to enhance the quality of corporate disclosures. Narrative disclosures generally compliment the accounting information provided in the annual reports with managements' view on opportunities and risks and comments on CSR which may influence the value of the firm (Yeoh, 2010). Moreover,

it's a useful source to attain company related information for financial analysts and different kind of investors (IASB, 2006). The relevant regulatory bodies in developed countries are now concentrating more on the importance and availability of management discussion in the annual reports of firms regarding financial as well as non-financial issues. Recent accounting research has mainly focused on corporate disclosures, development of new methods to enable researchers in studying voluntary disclosures and its quality. Literature review of Healy and Palepu (2001) showed that measuring CSR disclosure is a challenging task for researchers. In order to reach precise and reliable results the measuring methods of voluntary disclosure quality should be improved (Core, 2001).

Currently, narrative disclosure is practiced by many firms around the world to inform their stakeholders about their involvement in social and environment related activities. These narrative disclosures can be made in annual reports or dedicated CSR reports. Hbek and Wolniak (2016) argue about the quality of these disclosures irrespective of their length. For example a firm's disclosure might consist of many pages explaining their participation in various social and environmental projects but might miss the specific details needed by their stakeholders. Therefore, lengthy disclosure doesn't mirror the quality of disclosed information (Hbek & Wolniak, 2016). They examined the disclosure quality of standalone reports and found that quality of majority reports is low with regards to the disclosure components and its relevancy.

Although the fact that narrative reporting is voluntary in nature, is less motivating for firms to adopt it. Nevertheless, it is now generally considered a vital part of firm's financial reporting. Narrative disclosure shares information that is in addition to the legal binding on the firm to disclose. The IASB (International Accounting Standards Board) guides corporations on how to formulate and present management commentary. Generally in addition to sharing financial statements in the annual reports companies voluntarily include management commentary that consists of non-mandatory information. This voluntary information is normally used to assess the financial performance and financial standing of the firm by different stakeholders. One of the vital parts of narrative reporting is management's

commentary and it basically explains firm's performance. Another important part of narrative reporting is CSR report which gives comprehensive picture of firm's social and environmental participation and reduces information asymmetry and increase corporate reputation (Hahn & Lifs, 2014). GRI issued standard guidelines on how corporations should report on their sustainability activities since sustainability reporting is voluntary in nature and there is no set standard of its reporting. One of the reasons behind designing these guidelines is to help firms portray a real and impartial image of their CSR performance (GRI 2013). These guidelines are designed in such a way that companies are required to report on their socially responsible and irresponsible activities. On the one hand, reporting on the socially irresponsible actions might damage their legitimacy, while on the other hand the negative reporting by firm might be ranked as more honest and portrays firm as more reliable. According to Philippe and Durand (2011), negative reporting might also help firms in facing social as well as political pressure for disclosing transparently regarding their social and environmental engagements.

Researchers have studied various factors like firm size, industry belonging, corporate governance (CG) structures etc. that are believed to cause voluntary reporting. The association between quantity or quality of reporting and these factors is still unclear. Moreover, the consequences of CSR reporting quantity and quality identified by the literature are still understudy. Research shows that investors prefer putting money in shares of firms which make additional disclosures as it makes them feel less risky (Easley & O'Hara, 2004). Moreover, investors demand for greater return if there is less information available regarding that firm. In this regard, Kang (2004) studied the connection between firms' disclosures and its stock returns by deriving a disclosure risk premium in order to capture the variations in return on shares. Kang divided the cases in to two categories, stocks with information asymmetry and stocks without any information asymmetry. He concluded that investors demand higher disclosure premium from firms that practice poor or no disclosures at all.

Studies have also explored the relationship between voluntary disclosure quality and stock returns. In this regard, Hussainey (2010) showed that firms having low

quality disclosure have to pay higher cost of capital as compare to their counterparts which shows that market demands for higher return when the stock is risky and has low quality disclosure. Schleicher, Hussainey, and Walker (2007) studied the association of narrative reporting quality and expected share earnings. They found a huge variation between share price earnings forecast of firms reporting profits and firms disclosing financial losses.

2.3 Theoretical Background

There are various theoretical perspectives employed in studying the association between CSR performance and disclosure of firms. Gray, Bebbington, and Walters (1993) classify these theories in three broad categories; decision usefulness theories, economic theories and socio-political theories. However, the most intuitive theoretical findings were gained from studies based on socio-political theory (Gray, Kouhy, & Lavers, 1995). The frequently used socio-political theories in CSR literature are stakeholder theory, legitimacy theory and institutional theory with basic assumption that firms have influence over and get influenced by the societal environment in which it functions (Deegan, 2014). Whereas, the most used theory is agency theory, it is built on the perspective of capital markets which assumes that the interests of principal and agents are not always aligned. Different theories have been used in literature in an attempt to explain sustainability disclosure, but most of these theories look at the phenomenon from a single analytical viewpoint which could be a limitation in explaining CSR disclosures. No theory alone can explain the CSR phenomenon because there are always some limitations associated with it. Therefore, this study makes use of multiple theories to understand CSR disclosure in these economies. Previously mentioned theories have been explained in CSR literature in the context of developed markets, whereas the conceptual and contextual setting of developing countries specifically China and Pakistan is not similar to the developed markets. One aspect of dissimilarity between these settings is that firms disclose their sustainability related information on a voluntary basis because it is not mandatory in China and Pakistan. Literature shows that its common in such settings that some firms just fulfill the formality of CSR

reporting and don't provide detailed or explicit information regarding their CSR engagements. In such scenario it's not appropriate to treat CSR disclosure quantity as a representative of CSR disclosure quality as done in the studies of developing markets. The pioneering studies of CSR disclosure determinants and its impact on investment efficiency of firms have generalized the findings in the perspective of CSR disclosure quality as well because those markets have pre-defined guidelines on how to report on sustainability performance. Such guidelines are not compulsory to follow in developing markets like China and Pakistan; therefore, in this study separate indices are used to represent CSR disclosure quantity and CSR disclosure quality for both markets. Sustainability disclosure of firms has been evaluated to provide assistance to decision makers by translating environmental, social and economic data.

Below is the explanation of theories used for this study relative to the sustainability reporting practices of firms.

2.3.1 Stakeholder Theory

Stakeholder theory was developed by Edward Freeman and the doctrine of this theory says that organizations are obliged to a group of stakeholders, not just shareholders, and hence should be fair to all the parties involved in business. It explains how a firm manages the relationship with its stakeholders by making disclosure regarding their CSR activities. Social responsibility on the part of corporations is embedded in this theory which results in striving for economic with ethical considerations regarding all the stakeholders. This theory can be categorized into three groups; descriptive, instrumental, and normative. Management and communication with different stakeholders is discussed under the descriptive group. The normative explains how to take care of firms' stakeholders, and instrumental explains the connection among managing stakeholders and firm's objectives which are generally profit and efficiency (Donaldson & Preston, 1995). A stakeholder can be an individual or a group of individuals that can impact or get impacted by the functioning of a corporation (Freeman, Harrison, Wicks, Parmar, & De Colle, 2010). Since the definition involves a large number of persons or groups,

Max (1995)'s differentiation of primary and secondary stakeholders has been used in previous studies of Benlemlih and Bitar (2018) and Hillman and Keim (2001). Primary stakeholders are considered to be individuals or entities which are directly influenced by the functioning of an organization. Therefore, primary stakeholders range from employees and customers of a firm to the natural environment (Starik, 1995). This finding is also supported by Hillman and Keim (2001), who state that the group of primary stakeholder comprises of work force, customers, investors and suppliers. Max (1995) presented the view that a firm's stable profitability is mainly linked to its capabilities of creating, maintaining and distributing wealth or equivalent value amongst its primary stakeholders to maintain the firm's stakeholder system (Hillman & Keim, 2001). In addition to primary stakeholders, there are certain entities which are considered as secondary stakeholders such as human rights and community. The secondary stakeholders are taken as indirect beneficiaries of the activities and operation of a firm. Secondary stakeholders can also be expressed as those, who are indirectly affected by firms' operations or activities. A secondary stakeholder might be a close resident of a firm, whose benefit is associated with the firm's donations made to the community. Therefore, secondary stakeholders are found less interested compared to primary stakeholders about policies and actions of organizations.

The categorization of stakeholders in to primary and secondary groups implies that the attention paid to these groups by organizations is likely to differ. This classification is the dispute between the two branches of stakeholder theory, namely ethical and managerial. The Dos and Don'ts based on ethical standards of right and wrong are prescribed by the ethical branch (Donaldson & Preston, 1995). The basic assumption of ethical branch is that stakeholders have some fundamental rights for instance reasonable salary and safe environment to perform job etc. and they deserve to be treated fairly in such matters. Hasnas (1998) argues that exclusive objective of doing business is not to make money for stockholders; rather it's a medium to coordinate the interests of multiple stakeholders. Hence, managers owe a fiduciary duty to all stakeholders not just stockholders. In other words all the stakeholders must be focused while making business decisions including CSR disclosure (Belal & Roberts, 2010). Hasnas (1998) identifies that it

is the duty of management to keep a fair balance between all of the stakeholders. This refers to the compromising of money making objective on the moral ground, when it comes to choosing between well-being of shareholders and stakeholders (Stoney & Winstanley, 2001). Therefore, the ethical branch assumes that companies should be socially responsible (Hasnas, 1998). Hence, firms participate in social and environmental related activities which they consider they have an ethical responsibility towards, for instance providing reasonable salary and safe environment to perform job etc. It is argued that the responsibility lies with the businesses of communicating their CSR involvement with their stakeholders so that they may know that how it is affecting them (Deegan, 2009).

In contrast, the managerial branch of stakeholder theory favors a different treatment towards different stakeholders. Essentially the managerial branch proposes that businesses are based on different inter-linkages and it's the duty of management to onboard all the stakeholders effectively in a bid to achieve firm's objectives (Jawahar & McLaughlin, 2001). Managerial branch contends that firm's welfare is optimized by meeting the needs of the firm's important stakeholders in a win-win fashion (Harrison & John, 1996; Walsh, 2005). Managers of companies with CSR strategies consider the welfare of a large group of stakeholders while deciding on resource allocation options. Literature suggests that firms discriminate between stakeholder groups (Bourne & Walker, 2005; Frooman, 1999) and prefer investment according to the respective power held by a particular group in the most powerful group (Gioia, 1999). As explained by Max (1995), the primary stakeholders need to be managed effectively as they exercise a significant influence over firm. Their management can help the firm develop inimitable resources which have the ability to protect against the erosion of any financial benefits that these resources might generate. Communication is a tool that businesses can use to manage the relationship with their stakeholders so that they may win their support or distract their conflicts. Ullmann (1985) explains the connection among CSR performance, CSR communication and financial performance of firms with the help of a three dimensional model. He identifies first dimension as stakeholder power. He explained the importance of stakeholder power and argued that if a stakeholder is essential to the company then the company will strive to fulfill the demand of that

specific stakeholder. Hence, Roberts (1992) discusses how CSR involvement and communication plays a vital role in managing stakeholders. The second dimension is related to the strategic stance a firm takes while designing its sustainability policy. A company constantly reviewing its CSR policy with regards its stakeholders and responding by addressing their needs is said to be taking a specific strategic stance. The third and last dimension is about the financial performance of a company. The financial condition of a company governs its participation in sustainability related projects. Businesses have multiple stakeholders and it is up to the management to decide whether few or all stakeholders get served. According to Mitchell, Agle, and Wood (1997)'s model of stakeholder identification and eminence, the importance of answering the demands of any stakeholder depends upon three characteristics namely urgency, power and legitimacy. Since, the concept of CSR gained popularity in 1970s, henceforth its possible link with financial performance is of increased interest for academicians and practitioners. According to the stakeholder theory perspective, firms need to have easy access to the resources that stakeholders control. This effective relationship can be developed by reporting stakeholders about CSR related activities. Furthermore, firm specific assets which are hard and sometimes impossible to imitate when allocated to CSR activities certainly enhance company's image and value. This in turn will make the company an ideal employer, put the company on a competitive advantage, improves customer trust consequently improving financial performance. Stakeholder theory also asserts CSR as an extension of effective CG system for conflict resolution between managers and stakeholders.

2.3.2 Legitimacy Theory

Legitimacy theory explains the reasons behind companies' decision to disclose their CSR performance to the public. Legitimacy is a credible trust between the operations of an entity and social norms of the society (Suchman, 1995). Legitimacy theory refers that a company's operations should show compliance to the expectations of the society, while mainly focusing on providing quality goods and services. Every business organization operates in a certain social system, thus

it should not have any unwanted impact on the society as a result of its operations (Deegan, 2002). The companies are considered to be good social citizens on the basis of their social commitments. For the purpose, the companies may need to customize their business processes. In another study it is argued that legitimacy theory not only requires changes in business operations, rather it focuses more on the disclosure of information (Newson & Deegan, 2002). Therefore, this leads to the perception, which states that with the changing expectations' of the society, the company should demonstrate the required changes in its operations as well. However, changing business operations is also subject to risks, which can also affect the objectives of the organization.

The contemporary literature indicates that legitimacy theory is mainly employed to establish a connection of financial performance with CSR disclosure made by companies. Numerous studies indicate that legitimacy theory is the one, which describes social and environmental disclosures and their respective significance with regards to financial performance (Deegan, 2002; Deegan & Gordon, 1996; O'Donovan, 2002). Moreover, this theory is also used as a motivation for companies to report on their CSR performance. Contemporary studies also highlight that business managers will make more CSR disclosures, when communities will force them to do so. In this vein, Patten (1991) examined the source of motivation behind social reporting by companies. He identified two reasons namely public pressure and profitability. It is reported that firms larger in size, may often make disclosures about their social and environmental performance. Moreover, he evaluated the effect of CSR disclosures on the financial performance of companies and found that larger companies receive attention in the media and thus commence CSR relevant activities to improve their public image. This results in other companies in the same industry to also commence CSR activities.

Social contract is the basic idea behind legitimacy theory, which exists among an organization and the society it is operating in. This contract obliges a company to undertake various CSR relevant activities in order to attain company's improved social acceptability, leading to achieve the company's objectives and ultimate business survival. In case, a company is unable to comply with societal expectations

then this may result into some societal sanctions (Deegan & Unerman, 2006). However, the management in the companies can have different approaches with regards to terms and conditions of the social contract and henceforth can adopt various strategies to ensure that the scope of their CSR activities are acceptable to the various stakeholders.

Legitimacy theory is based on a positive framework, which specifies the behavior of a company in terms of steps taken that appear legitimate rather than explaining about, how should a company behave to gain legitimacy. When a company's legitimacy is threatened due to neglected CSR relevant performance then it leads to economic, social and legal implications. In such cases, companies can voluntarily share their social and environmental information in a bid to build trust with their stakeholders for improving their image. In some cases, a specific industry as a whole suffers the crisis of legitimacy due to poor CSR relevant performance. There, a centralized body of the industry needs to undertake certain actions, which may bring a level of legitimacy to the whole industry (Deegan, 2006).

2.3.3 Institutional Theory

Institutional theory asserts that organizations pursue the rules and expectations of institutional environment in order to achieve legitimacy and prestige (Scott, 1987; Suchman, 1995). Institutions are formal or informal rules and norms followed by the members of a given community, as a result of material, normative or cognitive thinking (North, 1991). Helmke and Levitsky (2004) differentiated between formal and informal institutions as openly codified and established via official channels i.e. constitutions, laws and regulations vs. unwritten socially shared rules enforced via unofficial channels i.e. customs, traditions etc.

These institutions are considered to be the main reason behind variations in CSR reporting (Blasco & Zlner, 2008; Gjlberg, 2009; Jackson & Apostolakou, 2010). This theory offers justifications to the selection of certain practices by organizations with ambiguous economic returns (Berrone, Cruz, Mejia, & Kintana, 2010; DiMaggio & Powell, 1983; Meyer & Rowan, 1977). This theory contextualizes business practices by seeking social, cultural, political and cognitive explanation

behind it (Matten & Moon, 2008) and hence gives insights in to how CSR is being practiced and reported under different governance structures. Institutional theory is believed to have a broader relevance (Dillard, 2004). The reason behind, start-up firms showing concern initially about many social and environmental issues but later following other peers once well recognized by the market, was explored by DiMaggio and Powell (1983). They explained this homogenization as isomorphism, which is a process that restricts a unit of population to behave in a similar fashion as others with similar environmental circumstances. There are several reasons behind institutionalization of some specific practices but three of them namely coercive, mimetic and normative are well-established in the literature.

Coercive isomorphism is when some informal pressures like rules and regulations etc. force businesses to conform to institutionalized processes. Coercive isomorphism basically originates for two reasons, a) society's pressure to follow pre-set trends, b) pressure from peers on which the firm is reliant on (Mizruchi & Fein, 1999). There are quite similarities between coercive isomorphism and managerial branch of stakeholder theory.

The managerial branch claims that a company needs to fulfill the demands of powerful stakeholders if it wants to survive. With regards CSR reporting perspective, a firm could report its social and environmental related practices to win the favor of its more powerful stakeholders while paying least attention to other stakeholders because they hold less power (Deegan, 2009).

Mimetic isomorphism happens when firms imitate their peers in order to attain legitimacy which leads to a competitive advantage over their competitors (DiMaggio & Powell, 1983). Uncertainty may possibly be a reason behind this behavior of firms. Therefore, in order to decrease uncertainty, companies imitate their peers which have positive reputation in the market (Rahaman, Lawrence, & Roper, 2004). One of the reasons behind practicing this approach of pursuing the current trend in CSR activities is the increase in legitimacy in the eyes of stakeholders.

From this it can be concluded that if companies keep up with latest trends with regards to CSR, they appear legitimate to their stakeholders. In other words when sustainability practices are stressed by the companies' stakeholders, the companies

are more likely to imitate or go beyond the social and environmental disclosure of other companies. So companies follow sustainability related practices just to appear similar as other companies in the market. With reference to neo-institutional theory, Soobaroyen and Ntim (2013) realized that there is a competition going on between firms not only on resources but also for attaining legitimacy.

The third form of isomorphism found in the literature is normative isomorphism (Ali & Frynas, 2018). It refers to the idea that companies under stress abide by some institutional practices. One common example of normative isomorphism is companies preparing their financial reports complied with IFRS (International Financial Reporting Standards). Although, it is not obligatory for them to follow this standard but around the globe majority of the accountants abide by these standards while preparing their reports. With regards sustainability disclosure, following the standard disclosure guidelines like GRI encourages the reporting on social and environmental related activities. There are general guiding principles available on sustainability disclosure by different accounting bodies and if followed by the corporations it can result in standardized practices.

Deegan (2009) concluded that it is quite challenging to differentiate between these three types of forces in practice. Moreover, since it is possible that multiple forces are working at the same time and that makes it difficult to determine which force is more strongly in action at any given point of time (DiMaggio & Powell, 1983). Deegan (2009) argues that the decoupling dimension of institutional theory explains the CSR disclosure practices by firms where they portray an ideal image when it comes to sustainability related practices in their annual reports. Whereas in real the management might be doing something very different or little as compared to what they claim just in order to gain social legitimacy.

Matten and Moon (2004) explained the differences in CSR practices between U.S and U.K. by suggesting that this is due to differences in cultural, financial, education and labor systems in both economies. Hence, institutional theory can provide insights into the differences in contexts where CSR is practiced and reported around the world. In this study key differences in CSR reporting practices of different countries from developing as well as developed world are explored.

2.3.4 Agency Theory

Agency theory helps understand the principals (stakeholders) - agents (executives) relationship and the problems evolving from this arrangement. In this framework agent is the delegated representative of a principal and welfare of the principal is influenced by the decisions of the agent (Berle & Means, 1933). Agency theory perspective establishes that the interests of both parties (principal and agent) are not aligned, which may lead to actions taken by agent, proving not in the best interest of principal, hence hampering smooth functioning of the company (Fama, 1980; Fama & Jensen, 1983). This agency problem is further aggravated when information asymmetry is present. The notion of information asymmetry is very relevant while studying sustainability reporting. Information asymmetry occurs when the agent (executives) can have access to information that the principal (stakeholders) cant approach. However, sustainability reporting increases the information symmetry in the market between a firm and its stakeholders which results in lower level of risk for the organization (Cormier, Ledoux, & Magnan, 2011; Healy & Palepu, 2001). Therefore, some of the tactics used by shareholders, to align the interest of both parties, is imposing bonding costs and supervising the management of the firm (Jensen & Meckling, 1976). With regards agency theory perspective, the CSR reporting is one of the bonding costs spent with the intension of minimizing the agency issues by the firm (Jensen & Meckling, 1976). In some cases the management portray to its stakeholders that the company is doing its best with regards to its sustainability performance by reporting about it (Jensen & Meckling, 1976). Interestingly few theories are applicable to both CSR performance and CSR disclosure. One such theory is agency theory, which explains CSR reporting from the viewpoint of information asymmetry and CSR performance from the perspective of under or over investment.

Friedman (1970) argues that involvement in social and environmental activities is an indication of agency conflict. He contends that agents can participate in sustainability activities to achieve their personal goals which are basically financed by the principals. In this line, Barnea and Rubin (2010) points out that if spending on sustainability activities decreases the value of the firm then inverse relationship

between CSR and presence of affiliated insiders is anticipated. Their study contend that affiliated insiders of a firm have an interest for investing in CSR beyond the degree that is optimal for increasing firm value. Therefore, CSR might become a source of clash among different type of shareholders. In a recent study of Jo and Harjoto (2012) the connection between corporate social performance and corporate financial performance was examined using agency theory. The proposition was that involvement and reporting of sustainability activities is expensive and is wastage of resources, and hence should negatively affect the firm value. Their results revealed a positive relation that was against their proposal based on agency theory.

2.4 Hypotheses Regarding Drivers of CSR Disclosure

Majority literature available on CSR from developed economies shows that CSR reporting has been increased by the firms in result to different reasons. These reasons can be associated with improved and expanded media coverage, increased overall risk, better legislation, emergence of ethical investment concept, demands from pressure groups, increased economic activities and more of all, the enhanced public consciousness (Duff, 2016; Ge & Liu, 2015; Haniffa & Cooke, 2005; Michelon, Pilonato, & Ricceri, 2015).

As sustainability reporting is not mandatory in China and Pakistan, so an interesting avenue is to explore what are the drivers that become the source of this deviation? These drivers are significant to explore because studying these factors that impact the CSR reporting of firms can help in

1. Improving the quantity and quality of CSR reporting.
2. Improving the comprehensiveness of CSR reporting.
3. Enhancing the extent of CSR reporting.

In literature the drivers or determinants of CSR are classified chiefly in to two groups (Pistoni & Songini, 2013). These two groupings are internal/firm-specific

features and external/ environment-specific features. The table below explains each group of CSR disclosure determinant in detail

TABLE 2.1: Classification of CSR Determinants

Group	Example
Internal factors/firm-specific factors	Firm size, age, industrial belonging, financial performance, profitability, CSR committee, governance structure, ownership structure.
External factors/ environment specific factors	Pressure from media, country belonging, political context, cultural setting, stakeholders activism, legislative requirements.

(Pistoni & Songini, 2013)

2.4.1 Firm Specific Features

Starting with the drivers of CSR reporting, this section focuses on firm specific features that literature has identified to be impacting the quantity and quality of social and environmental reporting. In 44 Malaysian firms with government connections Rahman, Zain, and Al-Haj (2011) studied the impact of firm specific features on CSR reporting. They employed content analysis to design an index for sustainability reporting and used regression technique to attain the results. Their results revealed that firm size was the only feature that had a significant impact on CSR reporting of firms. Ho and Taylor (2007) investigated the drivers of the quantity of sustainability reporting for 50 biggest Japanese and American firms. They used sustainability reporting index and found that firms low on liquidity, low on profitability, big in size and belonging to manufacturing industry, were reporting high on their social and environmental related activities. Same results were found by Crdova, Zorio-Grima, and Merello (2018) while studying the firms from South America, where they found positive relation with firm size and presence of CSR committee of environmental disclosures by firms. Furthermore, while studying the determinants of CSR reporting quality, Gerwanski, Kordsachia, and Velte (2019) also provide evidence that the likelihood of adopting social and environmental reporting is higher for firms big in size and for firms having big boards

as compare to their counterparts. Focusing on firm size, many studies report a significant association between size of the firm and its likelihood of adopting CSR reporting (Kuzey & Uyar, 2017; Rahman et al., 2011; Sotorro & Snchez, 2010). Whereas, on the contrary Wuttichindanon (2017) did not find that the size or profitability is in anyway related to the decision of CSR reporting. By employing a sample of 137 listed companies on Stock Exchange of Thailand they showed that government ownership derives the disclosure by firms on their CSR activities. However, Okereke, Vincent, and Mordi (2018) reveal that the materialist-instrumental reasoning backed the environmental disclosure decision by Nigerian firms. Conversely, Kolsi and Attayah (2018) found no association between CSR reporting and financial performance of the firms, industrial belonging and concentrated ownership. They studied Abu Dhabi stock exchange (ABX) for a period of five years and showed that the disclosure of environmental information is more pronounced in firms having big size, larger boards and high on financial leverage. On the other hand some studies report a significantly positive relationship between tendency to disclose CSR related information and financial performance of the firm (Clarkson, Li, Richardson, & Vasvari, 2008; Cormier & Magnan, 2003; Gautam, Singh, & Journal, 2010; Murray, 2006; Stanny & Ely, 2008; Tagesson, Blank, Broberg, Collin, & Management, 2009). A study from Indonesia showed that firm's profitability, level of leverage, size, and its industry affiliation are the substantial determining factors behind its environmental disclosure level (Faisal, Andiningtyas, Achmad, Haryanto, & Meiranto, 2018). Regarding firms' age Badulescu, Badulescu, Saveanu, and Hatos (2018) found that there was a significant difference between mature firms and young firms with regards to CSR but they didn't classify it as a determinant of CSR.

Some studies also analyzed the determinants related to the qualitative aspect of CSR reporting. Legendre and Coderre (2013) found that large and profitable firms issue high quality reports regarding their sustainability activities. Giannarakis, Zafeiriou, Arabatzis, and Partalidou (2018) greatly support a direct association among governmental ownership and environmental reporting quality. They studied 215 highly liquid corporations listed on European 500 index and found that board size and governmental ownership are significant determinants that can explain the

variation in environmental disclosure quality between firms but firm size failed to do so.

O'Donovan (2002) concluded that profile of the company, industry type, firm size, disclosure policy, leverage, community expectations and environmental news are potential variables that can be considered to record CSR activities as per legitimacy theory. Chen, Feldmann, and Tang (2015) analyzed behavior of US companies over the period of nine years (2000-2008) and found that there are high chances of firm's quality reporting on CSR activities when it's among the ones who are more committed to financial reporting quality.

Extensive literature studied various firm-specific features having a substantial impact on sustainability reporting but as shown above the results are varying and conflicting. Some studies show a positive impact of some features whereas others show a negative, and some claim no relationship at all with CSR disclosure. Therefore, it can be concluded that the evidence supporting significant impact these firm specific features is lacking.

2.4.1.1 Firm Size

CSR literature asserts that the large firms face comparatively more pressure to follow stakeholders norms (Hackston, 1996). The justification for this claim comes from the fact that because of large scale activities of big firms, more number of shareholders are engaged with them who may expect from the firms to be socially responsible while making investment choices (Cormier & Gordon, 2001; Cormier, Magnan, & Van Velthoven, 2005). As a response the corporations report on their CSR activities in order to attain legitimacy and avoid becoming a target of pressure groups (BenAmar & McIlkenny, 2015). Moreover, as large firms are exposed to greater stakeholders as compare to small ones (Deegan & Gordon, 1996), a higher quality sustainability disclosure from these firms is anticipated. Moreover, as advocated by Wong and Fryxell (2004), with the increased consideration and concernment regarding social responsibility of businesses, the large firms are more concerned about their reputation and hence report on their CSR activities to gain

positive public perception and avoid scrutiny from the public. In finance literature the public pressure is often represented by firm size (Patten, 1991). Based on this logic Adams, Hill, and Roberts (1998) argue that highly visible firms are more inclined towards providing higher quality CSR reports in order to answer the demands by social activist groups. In addition, Rankin, Windsor, and Wahyuni (2011) showed that large firms report more on their sustainability activities, firstly, because of their high visibility and secondly in order to reduce the chances of possible regulation threat.

In a study of Clarke and GibsonSweet (1999), it is reported that larger companies or the companies having high public presence utilize their annual reports to share their CSR relevant performance to relevant stakeholders. There exist only fewer firms which publish separate reports focusing only CSR activities. Thus, it is concluded in the study that annual reports were utilized as tools of legitimization for communicating with relevant stakeholders to establish a level of legitimacy.

Cormier and Gordon (2001) also employed legitimacy theory to study the variations of social and environmental disclosures of three electric utilities, two public and one private firms of Canada. They find that social and environmental reporting is correlated with size and ownership type of the company. The larger government owned utility provides improved disclosure of CSR activities. This supports the fact that social and environmental disclosures help public companies in dealing with pressure. Moreover, the larger public companies are more visible and thus, held more accountable.

Legitimacy theory is applied to investigate CSR disclosures made in Australian food and beverages industry by Cuganesan, Ward, and Guthrie (2007). It is found in the study that high profile firms generally make more CSR disclosures compared to low profile firms. The reason is linked to the main product of a high profile company having negative effects. Thus it is considered as a safe exit to deflect the attention through employing legitimization policies rather adopting a costly option of changing the product. Thus the level of information disclosed by a company about CSR depends upon: the size of company's profile and negative effects of the products of the firm.

Another line of research advocate that the process of adopting CSR activities and compiling, analyzing and reporting on such activities takes a lot of time, expertise and financial as well as human resources (Liu & Anbumozhi, 2009). Larger firms in comparison to their counterparts are more in a position to bear the expenses of such activities (Chithambo & Tauringana, 2014). Hence, the likelihood of larger firms regulating the perception of investors regarding risk by reporting on their CSR activities is relatively high. Thus it is argued that the size of the firm significantly impacts the extent and quality of CSR disclosure. Hence the following hypotheses are formulated;

H1a: There is a positive relationship between firm size and CSR disclosure quantity.

H1b: There is a positive relationship between firm size and CSR disclosure quality.

2.4.1.2 Firm Profitability

A firm's potential to make money by employing all the capital it possesses in a specific time period is called profitability (Pahuja, 2009). Investors consider profitable firms as bright candidates for investment since financial profits show that the company is run efficiently and there are optimistic chances of its survival. Likelihood of a company to report on its sustainability related activities depends upon its profitability. The profitable firms disclose their sustainability performance to their stakeholders to legitimize their activities. As advocated by Deegan and Gordon (1996), firms use CSR reporting to legitimize their activities as per the values and beliefs of their stakeholders. Stanny and Ely (2008) contend that highly profitable firms report more on their environmental activities to portray its positive image in the market. In addition, the financial condition of a firm increases its ability to undertake environmental protection measures in its operations (Cormier & Magnan, 1999). Companies with good financial performance are capable of overcoming losses due to their investment in environment related activities and this act by the company conveys a positive image to its stakeholders.

Moreover, from stakeholder theory viewpoint, companies regard their stakeholders as part of an environment that needs to be managed in order to generate profits.

Employees prefer those employers that are ethically responsible and hence such employers are more likely to gather efficient human capital. Moreover, due to the increased concerns towards social and environmental responsibilities of businesses, investors, specifically institutional investors also show more preference for ethically responsible firms. Finally, customers are likely to favor the firms that are socially and environmentally responsible, which results in increased demand for the firms' product or service.

The more important element required in undertaking and reporting on sustainability activities is financial capability (Gamerschlag, Mller, & Verbeeten, 2011). In this regard, CSR literature supports the positive relation between firm profitability and CSR disclosure (Li & McConomy, 1999; Neu, Warsame, & Pedwell, 1998). This leads us to our next set of hypotheses;

H2a: There is a positive relationship between firm profitability and CSR disclosure quantity.

H2b: There is a positive relationship between firm profitability and CSR disclosure quality.

2.4.1.3 Firm Indebtedness

Indebtedness is the extent to which a firm's assets are funded by long-term and short-term debts (Pahuja, 2009). Stakeholders are categorized based on their relationships in three major categories i.e., urgency, legitimacy and power whereas, lenders are categorized in to two significant categories of power and legitimacy (Mitchell, Agle, & Wood, 1997). Stakeholder theory postulates that lenders are one of the influential external stakeholders and hence contribute majorly in meeting the targets of a firm. When the corporation is functioning smoothly, it is being managed by its stockholders as owners. Whereas, when the firm confronts instability, lenders have the right to take control of the firm in their hands (Myers, 1977). This shows that lenders are one of the important stakeholders of any organization. Lenders demand for increased information disclosure from firms they lend to. Moreover, banks and other lending institutions tend to provide loans to firms with positive reputation. Therefore, the chances of firms with high level of

debts on their balance sheet are more to report on their social and environmental performance as a mean to fulfill the demands of banks and other lending institutions. In order to avoid any possible restrictive debt agreement with creditors and reduce agency costs the firms disclose more. From agency theory point of view the companies minimize their cost of acquiring capital by reducing agency costs through reporting on their sustainability activities (Ho & Taylor, 2007; Jensen & Meckling, 1976). Firms regularly issue comprehensive CSR reports in order to assure lenders that the firm is capable of paying back its loans.

Another stream of research claims a negative relationship between firm indebtedness and sustainability disclosure. Indebtedness is usually taken as performance booster for the firm and it provides a general overview of firm's capital structure. High level of indebtedness means that there are high chances of firm undergoing debt contract violation (Gomariz & Ballesta, 2014); hence the firm's management would try to overstate the current profits as compare to future profits. In doing so, the highly indebted companies will report less on their sustainability activities in order to report high profits for current period as compare to later period. Retno and Priantinah (2012) grounded their study on agency cost theory and showed that highly indebted firms will report more on CSR activities because of high agency cost associated with such kind of capital structure.

Apart from agency theory, studies based on other perspectives also report negative association between indebtedness and CSR reporting. In this vein, Andrikopoulos and Kriklani (2013) contend that highly indebted firms report less on their environmental activities because the process of researching, compiling and issuing environmental reports are costly which makes it unaffordable for firms that are already under the burden of debt. Luo, Tang, and Lan (2013) also maintain that highly indebted firms have to make high interest expenses, for this reason these firms are careful when it comes to environmental protection measures and its reporting. Maya Purushothaman, Greg Tower, Phil Hancock, and Ross Taplin (2000) also found inverse relation and claimed that highly leveraged firms maintain close ties with the lenders and follow other ways to inform them regarding their sustainability activities. This leads us to the next set of hypotheses;

H3a: There is a negative relationship between firm indebtedness and CSR disclosure quantity.

H3b: There is a negative relationship between firm indebtedness and CSR disclosure quality.

2.4.2 Governance Structure

Corporate governance is defined by The Cadbury Report (1992) defines it as a set of rules by which the corporations are controlled and directed, and in what ways the management is answerable for their decisions to the stakeholders of these firms (Dahya, Lonie, & Power, 1996). When corporate governance is executed effectively it results in transparency to the stakeholders, and according to Wise and Ali (2009) this transparency includes reporting on sustainability related activities as well. Prior studies have argued that CSR disclosure is determined by various factors at company as well as country level. Bonsn and Bednov (2015) reviewed the extent of CSR reporting and its determinants based on legitimacy and stakeholder theory from Eurozone companies listed in the STOXX Europe 600. In reporting pattern they found an intense use of CG (Corporate Governance) indicators, the environmental disclosure was moderate but disclosure on Social indicators was quite low.

In recent years, with the increasing concern towards CSR, literature has investigated several antecedents of CSR. A considerable amount of literature has associated CSR with firm specific characteristics such as size (Kuzey & Uyar, 2017), slack resources (Xu, Yang, Quan, & Lu, 2015) and firm maturity (Al-Hadi, Chatterjee, Yaftian, Taylor, & Hasan, 2019). Others have linked it with the presence of external factors like government actions (Aguilera, Rupp, Williams, & Ganapathi, 2007), activist group (Den Hond & De Bakker, 2007), and communities (Boehm, 2002). CG literature shows that board characteristics (Chang, Oh, Park, & Jang, 2017) and ownership structures (Das, Dixon, & Michael, 2015) have a profound impact on the tendency of firms' commitment towards sustainability practices. Similarly, Kili, Kuzey, and Uyar (2015) reported a positive association between

CSR disclosure and size of the board, ownership diffusion, board composition and board diversity in banking industry of Turkey.

In developing markets' context, NEDs (Non-Executive Directors) were found to be stewards disclosing more information on CSR activities to their stakeholders (Sharif and Rashid 2014). Furthermore board diversity was found to be significantly affecting the CSR disclosure decision in Australian firms whereas, board size and profitability were not related to CSR disclosure (Rao & Tilt, 2016). However there is still a lack of consensus among the findings in this area (Oh, Chang, & Kim, 2018; Walls, Berrone, & Phan, 2012). This study attempts to find the answer to these inconclusive results by specifically concentrating on the impacts of governance structure on sustainability reporting of a firm.

Increasing attention is being paid to the rules and philosophies of CG by economies around the world. The idea of CG has gained significant importance in Pakistan with the introduction of the Code of Corporate Governance (CCG) 2002 by the Pakistan Stock Exchange (PSX). In China the China Securities Regulatory Commission (CSRC) mutually with the National Economic and Trade Commission introduced the CCG in 2002. In both countries the CCG was issued in a bid to strengthen the regulatory system and its implementation. The firms listed on Chinese and Pakistani stock markets are bound to follow these rules and regulations regarding CG and thus can be associated with sustainability reporting. This research studies the impact of governance arrangement on the sustainability reporting extent and quality by firms listed on Chinese and Pakistani stock markets.

2.4.2.1 Board Independence

Contemporary research has emphasized the importance of monitoring role played by independent boards in the settlement of agency conflicts, which usually arise due to the long-term nature of CSR investments. Generally, CSR activities demand considerable long term investments without instant financial rewards. Hence, self-serving management might abstain from taking CSR related projects (Liao,

Lin, & Zhang, 2018) because of its short tenures (Neubaum & Zahra, 2006). However, CSR investments are anticipated to provide long term benefits to stockholders by virtue of easy access to finance, improved reputation and reduced risk (Albuquerque, Koskinen, & Zhang, 2018; Cheng, Ioannou, & Serafeim, 2011; Saeidi, Sofian, Saeidi, Saeidi, & Saaeidi, 2015). This long term nature of CSR investments leads to divergence of interest between principal and agents (Tauringana & Chithambo, 2015). As self-serving activities of management could not be countered by legislative actions, hence monitoring role of board becomes increasingly important in such situations (Roe, 1991).

Research demonstrates that besides economic resources, a fundamental element required by companies to initiate sustainability related activities is relational and human capital (Tate & Bals, 2018). CSR related projects demand for people intensive structures and cross functional coordination for successful designing and execution (Pohl & Tolhurst, 2010). Generally, independent directors contribute in firm's relational and human capital through providing professional expertise, competencies, external links and unique skills (Chen, Hsu, & Chang, 2016). This valuable capital help firms in resolving environmental uncertainties, acquiring vital resources and managing external dependencies, resulting in enhanced sustainability performance (Ramn-Llorens, Garca-Meca, & Pucheta-Martnez, 2018). In the same vein, Liao, Luo, and Tang (2015) maintains that independent boards create environmental opportunities through utilizing their specific expertise. Further, literature also cites that diverse background and good stakeholder orientation edifies independent directors' capabilities in maintaining a tradeoff between environmental and financial accountability (Al-Dah, 2018). This strengthens board for attaining a fine balance between short and long term goals, leading to accommodate varying interests of multiple stakeholders. Empirical studies show that independent boards are more open in sharing CSR information (Post et al, 2011). In addition, the independent directors remain cautious for stakeholder's demands so they develop CSR campaigns based on innovative vision, which ultimately enhances firm's competitiveness and prestige in the society (Garcia-Sanchez, Cuadrado-Ballesteros, & Sepulveda, 2014) and also proves to be helpful for continuation of

directorship (de Villiers, Naiker, & van Staden, 2011).

Above mentioned arguments lead to the next set of hypotheses of the study:

H4a: There is a positive relationship between board independence and CSR disclosure quantity.

H4b: There is a positive relationship between firm board independence and CSR disclosure quality.

2.4.2.2 Board Size

In contemporary CG literature, there has been an increased interest in corporate board size (Catanzariti & Lo, 2011). Board size represents heterogeneity between board members on skills and expertise, age, gender, nationality, educational background, experience etc. (Nielsen & Huse, 2010; Van Knippenberg, De Dreu, & Homan, 2004; Xie, Davidson, & DaDalt, 2003). A considerable amount of literature regarding board effectiveness shows that large boards are more effective than their counter parts because of the diversity among the board members (Bonn, Yoshikawa, & Phan, 2004; Carter, Simkins, & Simpson, 2003; Erhardt, Werbel, & Shrader, 2003). Rao and Tilt (2016) conducted a longitudinal study in Australia, his study confirm the existence of better CSR reporting in the presence of diverse boards possibly because of greater resources due to their diversity. Same relationship was explored by Kili et al. (2015) in Turkish banking sector. Moreover big boards are more effective when it comes to devising strategies, monitoring, controlling and advising on different issues including CSR (Esa & Ghazali, 2012; Siregar & Bachtiar, 2010). Big boards are a source of attaining variety in knowledge, capabilities, and expertise, which leads to effective group discussion and efficient conduct (Forbes & Watson, 1993; Van Knippenberg et al., 2004). Whereas, small boards tend to have more or less similar viewpoints and attitudes, this amalgamation in perspectives leads to conformity (Miller & del Carmen Triana, 2009). Grady (1999) argues that this conforming attitude lowers the quality and variation of boardroom discussion over different issues. Research shows that CSR is a multidimensional and complicated notion (Tilling & Tilt, 2010). Therefore, the decision regarding CSR reporting needs comprehensive understanding

regarding different social and environmental notions for example human resource management and welfare, environmental protection, customer care, and community welfare etc (Gray et al., 1995).

Furthermore, since CSR reporting is not mandatory like financial reporting, so the mandatory standard is not there (Deegan, 2006). Therefore, Hemingway and Maclagan (2004) contend that boards' decision making regarding CSR is likely to be influenced by their philosophies and values. The decisions made after considering multiple perspectives and detailed discussion, which is achieved when the board is bigger in size, are proven to be of more advantage especially in complicated judgments like sustainability reporting (Wiersema & Bantel, 1992). Nielsen (2010) confirm this argument by showing that diverse management groups show superior performance in unstable conditions, while less diverse management groups perform better in stable situations. The latest economic instability and ambiguity regarding sustainability concerns e.g., global warming and the establishment of different initiatives like Integrated Reporting (IR) makes it an unstable situation (Atkins & Maroun, 2015). Therefore, this study hypothesizes that;

H5a: There is a positive relationship between board size and CSR disclosure quantity.

H5b: There is a positive relationship between firm board size and CSR disclosure quality.

2.4.2.3 Multiple Directorships

Agency theory contends that boards' duty is to play a monitoring role of overseeing management's behavior and make sure that the interests of shareholders are protected and well-served (Linck, Netter, & Yang, 2008). In this context, CG literature shows that the responsibility of setting firm-level strategies (Ruigrok, Peck, & Keller, 2006), contributing to firms' improvement by contributing through their nonpareil cognizance (Carpenter & Westphal, 2001; Goll, Johnson, & Rasheed, 2007; Gray & Nowland, 2017) and providing support in attaining important resources (Dass & Massa, 2014; Faleye, Kovacs, & Venkateswaran, 2014; Hillman & Dalziel, 2003; Jones, Makri, & Gomez-Mejia, 2008) also lies on the shoulders

of company's board. In other words sitting on the boards of various firms enable these directors to arrange for critical resources and provide advice from numerous perspectives when needed by increasing them in knowledge and capability to do so. Hence, they contribute positively in the decision making procedure of firm (Carpenter & Westphal, 2001; Ruigrok et al., 2006). The previously attained expertise and experience of these members help firms in many ways (Gul & Leung, 2004). Furthermore Hillman, Keim, and Luce (2001) categorized external board members in to 1) business experts, 2) support specialists and 3) community influential members. Business experts are board members who hold the position of director in more than one firm and hence hold knowledge and experience that helps the firm in positive way. The firms that are able to employ these resource-rich directors are more likely to attain important resources and deploy these resources to enhance their sustainability practices including CSR reporting (Johnson & Greening, 1999; Shropshire, 2010).

Del Vecchio (2010) contends that multiple directorships is one of the ways through which knowledge transfer in CSR happens which lead the firms to adopt efficient governance practices. This shift in governance practices can be attributable to the notion that directors with multiple directorships adopt the practices of other boards they sit on (Davis & Greve, 1997). Conyon and Muldoon (2006) studied CG impact on firm's strategies using data from US, Germany and Great Britain. Their study helps us understand the association between board of directors and company's approach towards different issues including CSR disclosure. According to Wood (1991) social responsibility of an organization includes, outlining the principles of sustainability, CSR practices, policies and results of these policies. Therefore, a company's board is the platform from where directors learn and enhance their perspective (Charreaux & Wirtz, 2007; Wincent, Anokhin, & rtqvist, 2010). This notion of multiple directorships leading to increase in abilities and knowledge of directors was further confirmed by Del Vecchio (2010). She showed that the density of relations as well as their concentration around a node has significant impact on the efficiency of that network.

Furthermore, there is a consensus in the management research that belonging to

a network helps increasing awareness and skills. Hence, firms that are affiliated with the same sector or firms that design uniform strategies are more likely to be influenced by each other in embracing corporate practices including CSR disclosure practices. According to legitimacy theory they do so in order to gain the favor of important stakeholders. This leads us to our next hypotheses;

H6a: There is a positive relationship between multiple directorships and CSR disclosure quantity.

H6b: There is a positive relationship between multiple directorships and CSR disclosure quality.

2.4.2.4 Political Connection

A company is said to be politically connected if members of its board or management have a political background or are currently in link with political people (Bai & Lian, 2013; Li, Song, & Wu, 2015; Marquis & Qian, 2014). Political connections have been found to significantly impact company's performance. Political involvement can guide firms' performance and their perspective by various means. Hillman (2005) argue that political affiliation works as a strategic asset and if used effectively it can result in improved overall performance and consequently increased firm value (Fisman, 2001; Johnson & Mitton, 2003). Chinese economy is currently going through the phase of transformation and the government is in control of important resources firms depend upon for their existence and growth. Firms require to maintain good ties with the government in order to achieve sustainable existence and growth. As a result of good ties with the government firms enjoy the privilege of low tax payments, controlled uncertainty by easy approach to resources like loans, preference in bids for government contracts etc. and easy regulatory conditions (Agrawal & Knoeber, 2001; Hillman, 2005). In response to these favors the reciprocity rule of social relations advocates that firms have to do something that government demand (Aronson, Wilson, & Akert, 2005). In this regard, government might ask businesses to participate in social and environmental activities (Li et al., 2015). Firms having political connections have to care for government demands in return of the favorable treatment. Chinese government

is giving more attention to firms CSR policies with the increased economic development in the country by issuing sustainability related rules and regulations. In return of government expectation the firms will ensure their reasonable sustainability performance and its disclosure. Additionally, involvement in sustainability activities helps reduce the negative impacts of political connections for instance weakened legitimacy and doubtful reputation (Porter & Kramer, 2006). Dickson (2003) argues that politically connected firms face more scrutiny as compare to their non-connected counterparts and hence are expected to behave ethically towards all stakeholders. Therefore, in a bid to avoid the negative effects of irresponsibility they would be more encouraged to undertake sustainability activities (Jia & Zhang, 2013).

Another line of research argue that political connections might aid in managing CSR expectations hence there remains no need for the firm to get involved in sustainability activities (Bai, 2013). In view of sustainability disclosure context, it is argued that the likelihood of politically connected organizations issuing sustainability reports in response to government pressure is higher (Marquis & Qian, 2013). The politically connected directors will encourage their firms to abide by government regulations and initiatives in CSR area. The literature discussed above leads us to our next set of hypotheses;

H7a: There is a positive relationship between board's political connection and CSR disclosure quantity.

H7b: There is a positive relationship between board's political connection and CSR disclosure quality.

2.4.3 Ownership Structure

Ownership structure of a firm is its internal arrangement of how the control of a firm is distributed. The ownership structure of firms varies around the globe. In some countries the ownership of corporations are in the hand of very few parties whereas in other countries the corporations are owned by a wide variety of owners (La Porta, LopezdeSilanes, & Shleifer, 1999). The developed economies

tend to have widely held corporations whereas corporate ownership in developing economies is heavily concentrated.

Thomsen and Conyon (2012) defined ownership structure with two distinguishing features i.e. ownership identity and ownership concentration. Ownership identity refers to the type of owner for example family, government, institution etc. and ownership concentration means whether the ownership of a company is in the hand of large owners (concentrated) or various small owners (diffused). Figure 2.1 shows that the owners can be insiders i.e. managers and employees of the firms, and outsiders i.e. other firms, government and individuals.

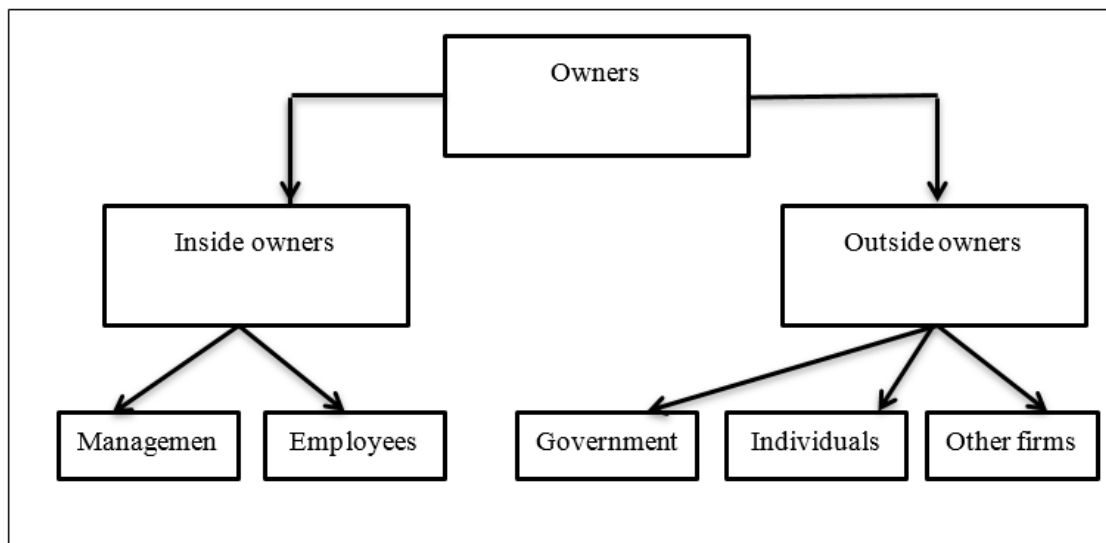


FIGURE 2.1: Ownership Identity

Literature shows that ownership arrangement of a firm has significant impact on the behavior of firms through its influence on monitoring style, decision making authority and incentive mechanism. In this regard Lopatta, Jaeschke, and Chen (2017) showed that the ownership structure of firm determines how much it will report on its sustainability related activities.

With regards to ownership structure, a study on Spanish market by (Prado-Lorenzo, Gallego-Alvarez, & Garcia-Sanchez, 2009) reported that shareholder power and ownership structure effect the CSR information disclosure by firms, where strength of relationship between ownership structure and CSR disclosure was comparatively stronger than shareholder power. Same were the findings of Das et al. (2015) who showed that ownership structure and CSR disclosure are

positively related, whereas, Akhtaruddin and Rouf (2011) found an inverse relation of managerial ownership with CSR disclosure.

This study mainly focuses on the identity part of the ownership arrangement because majority firms in China and Pakistan have concentrated ownership arrangements. Therefore, it becomes of more value to study the identity of owners and the implications it holds on various aspects of firm behavior including CSR disclosure because in diffused ownership arrangement the impact of owners' identity is counter-balanced by the little power held by a particular owner. Consequently this study studies the change in disclosure quantity and quality with the change in ownership identity.

2.4.3.1 Institutional Ownership

Business experts monitor the strategic decisions making by management (Jones et al., 2008) whereas, support specialist directors like institutional directors provide support for decision making in terms of their expertise and skill. Shaukat, Qiu, and Trojanowski (2016) argue that the contribution of these support specialist benefits the firm in strategic decision making for instance law, capital markets, technology, insurance etc. From this perspective Hillman and Dalziel (2003) categorized the directors who have attained expertise by serving in management of other firms. He contend that the specialized knowledge of these support specialists may benefit executives of the company with regards different strategic issues leading to improved commercial transactions of the company. Nevertheless, in comparison to business experts these support specialist lack in experience related to general management issues (Baysinger & Zardkoohi, 1986; Hillman & Dalziel, 2003). Pfeffer and Salancik (2003) argue that using their external links and know-how of various functions of the business, they provide social as well as human capital to firm's board which further help the business to acquire assistance from other firms. Bear, Rahman, and Post (2010) affirm this argument and show that support specialist keep connections with their clients, main firms and professional firms. These various connections outside the organization may lead to better fulfillment of stakeholders' demands, successful acquisition of assistance

from external sources and improved interpretation regarding the context in which the company is functioning. Such experiences and connections help these directors to promote association and mutual benefit with the important stakeholders (Beckman & Haunschild, 2002). Businesses in order to strengthen the relationship with their stakeholders might report on their sustainability activities. Therefore, support specialist including institutional directors tends to promote sustainability reporting in a bid to satisfy the demands and hence improve the relationships with their stakeholders.

Furthermore, institutional investors in order to gain legitimacy report on sustainability activities because otherwise their reputation is at stake (Pathan, 2009). Agency theory contends that socially responsible institutional directors tend to improve the internal monitoring mechanism of organizations. This helps them in reporting more on sustainability activities and restricting the possible issues for instance opportunistic behavior by management due to absence of information symmetry (Frias-Aceituno, Rodriguez-Ariza, & Garcia-Sanchez, 2013). Looking at this association from another perspective reveals that as institutional directors represent big investments in the firm so getting rid of this investment is difficult and costly for them. Moreover, as they have investments in various firms which makes it difficult for them to search for other reasonable investment targets. As a consequence, it encourages them to fulfill the monitoring duties by participating in strategic issues of businesses which includes sustainability disclosure as well. Research shows that institutional directors consider CSR as a source of competitive advantage and view companies as risky investments that do not participate in social and environmental related activities (Neubaum & Zahra, 2006; Scholtens & Zhou, 2008) because in uncertain environments companies can achieve legitimacy by disclosing CSR performance. This shows that institutional directors tend to favor CSR disclosure decision in the boardroom as it positively influence long-term performance of firm (Mahapatra, 1984). The literature discussed regarding the association between institutional ownership and CSR disclosure of businesses leads us to the set of our next hypotheses;

H8a: There is a positive relationship between institutional ownership and CSR

disclosure quantity.

H8b: There is a positive relationship between institutional ownership and CSR disclosure quality.

2.4.3.2 Family Ownership

Research suggests that family firms are less socially responsible. In this context Kellermanns, Eddleston, and Zellweger (2012) point out that family firms are more concerned with financial returns, owing to their huge financial investments in the firms. Singal (2014) shows that family firms with ample resources needed to carry out sustainability activities consider them merely as an expense and not as a management strategy or opportunity to improve firm performance. Additionally, studies show that family firms are found to behave responsibly as well as irresponsibly at the same time. They show responsible behavior for external stakeholders in a bid to save reputation and compromise when dealing with internal stakeholders for ensuring control (Cruz, Larraza-Kintana, Garcés-Galdeano, & Berrone, 2014). Family businesses are unique and different from their non-family counterparts and some differences are found even among family firms depending upon the type of involvement e.g. ownership, management or other governance mechanisms (Memili & Misra, 2015). Family businesses are unique and different from their non-family counterparts and some differences are found even among family firms depending upon the type of involvement e.g. ownership, management or other governance mechanisms. Therefore same behavior is found in CSR studies as well regarding the commitment and reporting of CSR, depending upon the degree and type of family involvement. Empirical research shows that companies under the influence of family are more rigid to adopt CSR standards (Campopiano, De Massis, & Chirico, 2014).

Another line of research argues that family businesses generally focus on non-economic goals for instance longevity, preservation of reputation in public and identity (Blodgett, Dumas, & Zanzi, 2011; Le Breton-Miller, Miller, & Steier, 2004). Family firms are guided by the desire of passing down a viable heritage,

hence family businesses indulge in sustainability activities so that future generations can inherit a firm with positive image (Miller & Le Breton-Miller, 2006). However, indulging in CSR activities may adversely affect the financial performance (Wright & Ferris, 1997), which suggests that family businesses would opt for CSR engagement only in case when it adds to firms' reputation and welfare (Gmez-Meja, Haynes, Nez-Nickel, Jacobson, & Moyano-Fuentes, 2007). In this relation, literature has found that family involvement in firms is negatively linked with sustainability practices (Morck & Yeung, 2003; Nekhili, Nagati, Chtioui, & Rebolledo, 2017).

Generally, family firms are majorly owned by family members and they also have a significant presence in the management of the business (Chu, 2011). Generally, family firms are majorly owned by family members and they also have a significant presence in the management of the business (Chu, 2011). This distinguishing feature of family firms may affect the behavior of overall corporate board. This distinguishing feature of family firms may affect the behavior of overall corporate board. Furthermore, a great degree of nepotism is observed when it comes to the selection of directors in family firms (Gabrielsson & Huse, 2005). In brief, family businesses generally resort to informal control mechanisms e.g. hiring and promotion of candidates who carry same values as those of family members (Collin & Ahlberg, 2012), which increases the influencing ability of family members over calling the shots.

In the line of above arguments it is expected that family firms show opposition to CSR related activities and it is hypothesized that family directors discourage participating in CSR activities owing to their profit making desire. As a result of low involvement and interest in sustainability related activities the family firms report less on CSR performance. Based on above discussion and empirical proof, the following hypotheses are proposed about the role played by family control;

H9a: There is a negative relationship between family ownership and CSR disclosure quantity.

H9b: There is a negative relationship between family ownership and CSR disclosure quality.

2.5 Hypotheses Regarding Impact of CSR Disclosure on Investment Efficiency

According to neo-classical theory (Modigliani & Miller, 1958), the firms should opt for all the projects with positive NPV and turn-down all the projects that leads to negative NPV. Firms keep on investing until the value of their marginal benefit gets equal to the marginal cost of projects in a bid to maximize their value (Hayashi, 1982). Nonetheless, there are mixed arguments in literature about this theory (Chen, El Ghouli, Guedhami, & Wang, 2017) because sometimes management is unable to commission all profitable investments and hence firms fall in to investment inefficiency.. In the past literature has heavily focused on two types of frictions; agency problems and information asymmetries (Stein, 2003). CSR performance appears to be vital factor for making strategic investment decisions through impelling a firm's financial restrictions. Furthermore, CSR performance of a firm helps it to acquire external finance (Cheng, Ioannou, & Serafeim, 2014) and undertake all positive NPV projects. It has been demonstrated that market prices CSR performance of firms through the channel of cost of capital (Xu, Liu, & Huang, 2015). Moreover, CSR engagements help firms build their positive reputation (Balmer, Greyser, & Worcester, 2009) which can resolve agency conflicts due to free cash flow (Michael C Jensen, 1986) and increase firms investment efficiency. Contrary to the agency problem views, information asymmetry hypothesis argues that communication gap between managers and shareholders increases the financing cost for companies. This suggests that when managers are better informed about the stock value then the investors, managers can opt to sell shares at higher prices. Nonetheless, if the shareholders possess the information about the communication gap, they are reluctant to purchase the high priced shares (Lang, Ofek, & Stulz, 1996). As a result the company's management becomes unable to raise sufficient capital to finance even the positive NPV projects. The implementation of CSR can reduce information asymmetries and mitigate agency problems (Cho et al., 2013; Hung, Shi, & Wang, 2013). The findings of existing studies on the effect of CSR performance on information asymmetry is consistent with the stakeholder theory i.e. socially responsible firms are relatively more transparent which

increases investor confidence and decreases information asymmetry (Cui, Jo, & Na, 2018; Martnez-Ferrero et al., 2015). Generally the socially responsible firms are less likely to present manipulated picture of their earnings and considered more transparent in extending their financial information (Kim, Park, & Wier, 2012). Thus, if the socially responsible firms are linked with more transparency, easy access to finance, high quality information and good reputation than it should be reflected in their investment efficiency as well. This study argues that the firms having socially responsible behavior are possibly linked with investment efficiency due to the low information irregularity and agency conflicts they face. Therefore, it is hypothesized that;

H10a: CSR disclosure quantity increases the investment efficiency of firms.

H10b: CSR disclosure quality increases the investment efficiency of firms.

Agency theory poses that sustainability disclosure has a virtue to reduce information asymmetries and improve capital market efficiency (Brown & Hillegeist, 2007; Clarkson et al., 2008; Martnez-Ferrero et al., 2015). Nevertheless most of the prior CSR disclosure studies document diverse results, for example, some studies show that sustainability disclosure impacts firm's performance positively (Anser, Zhang, & Kanwal, 2018; Chen et al., 2015; Malik & Kanwal, 2018), while other studies report negative or no impact (Seifert, Morris, & Bartkus, 2004). Similarly differences in results has been found among studies that explored the value financial markets give to CSR disclosures where some researchers demonstrated the positive response (Anderson & Frankle, 1980; Belkaoui, 1976) while others report no significant effect (Murray, Sinclair, Power, & Gray, 2006; Sampong, Song, Boahene, & Wadie, 2018). Guidry Ronald (2010) posits that quantity of social disclosure is not as effective as quality, in predicting the positive market reaction. Hence the inconclusiveness of existing results can be attributable to the fact that these studies do not differentiate between the quality and quantity of disclosures. Analyzing the current literature, it is expected that considering quality as an important factor for disclosures might enhance the understanding of CSR research.

The basic argument of stakeholder theory is that firms besides taking care of stockholders should also take care of other stakeholders demands which includes

requirement of good quality disclosures. This theory argues that sustainability reporting is a mean to improve investment efficiency by reducing information gap among companies and suppliers of funds (Cheng et al., 2014). It is argued that the higher is the firm's CSR disclosure quality the more credible is the information disclosed. In general, firms engaged in high quality sustainability disclosure will gain more trust of investors - making it easier for them to obtain capital, alleviate financing constraints and improve reputation (Dhaliwal, Li, Tsang, & Yang, 2011; He & Li, 2011). Generally, high quality disclosure is considered more reliable (Leitoniene & Sapkauskiene, 2015). It improves the information symmetry (Cho et al., 2013) and vanishes the impression of any irregularity in disseminated information. Additionally, the economic frictions caused by information asymmetry, such as adverse selection and moral hazard, are effectively attenuated by high quality disclosures through providing easy access to capital (Biddle, Hilary, & Verdi, 2009) and consequently improves investment efficiency.

The basic assumption of previous research on sustainability disclosure has been that the disclosures made are truthful and good quality. However, research demonstrates that corporations design their disclosure policies in a bid to achieve a certain response from the stakeholders. Studies reveal that corporations raise the reporting level right before they offer equity shares in the market (Jo & Kim, 2007), adjust readability of disclosures to misguide the current and potential shareholders (Lo, Ramos, & Rogo, 2017), and specially in markets with weak institutional, companies make spurious disclosures to mislead the shareholders. In summary, the good quality sustainability disclosure is more informative and hence increases information symmetry which ultimately leads to increased investment efficiency. Similarly low quality disclosure extends limited information, which does not decrease information asymmetry, resulting in negative impact on investment efficiency. This leads us to our next set of hypotheses;

H11a: High quality CSR disclosures positively impact the investment efficiency of firms.

H11b: Low quality CSR disclosures negatively impact the investment efficiency of firms.

Responsibilities of business have always been center of attention in society. Fundamentally stakeholder theory is centered on the scheme that organizations are consisted of mutually dependent relations and that companies have an obligation to cope with these relations strategically to meet business objectives (Crane & Livesey, 2003; Jawahar & McLaughlin, 2001). Stakeholder theory says that company's wellbeing is enhanced by taking care of the company's important shareholders needs in a win-win approach (Harrison & John, 1996; Walsh, 2005). Executives of firms making CSR-based policies consider a comprehensive set of shareholder interests while taking company's resource distribution decisions. Previous researches have suggested that organizations prioritize their investments in stakeholder group grounded on their corresponding power (Bourne & Walker, 2005; Frooman, 1999) and the stakeholder group that is professed as contribute most profit to the bottom line is given more precedence (Gioia, 1999). According to Max (1995), key stakeholders employ substantial influence on a company and efficiently handling primary stakeholders can bring growth to inimitable assets which give protection against the corrosion of any financial profits that these assets might produce. The underpinning for this opinion originates directly from resource based theory. Resource based theory postulates (Amit & Schoemaker, 1993; Barney, 1991) that companies who desire to gain an upper hand over their competitors must mature resources that are difficult to imitate, socially complex, causally ambiguous, and that pass through serious time-dependent phases. An effective interaction with primary stakeholders is one way to create such resources (Barney, 1991; Barney & Hansen, 1994). One more fundamental argument about this theory is that various kinds of CSR undertakings are not all equally rewarding. Precisely the CSR policies that are hard to reproduce by competitors are linked with producing better results financially. Specifically CSR actions towards its key investors are by nature hard to replicate by competitors. Whereas CSR actions towards its secondary stakeholders like community, e.g. participation of firm in social issues and community welfare are exclusionary in nature. The competitive advantage theory postulates that competitors can easily duplicate social welfare activities due to their transactional nature and therefore delivers no additional profit to the company's stockholders. In contrast CSR actions towards primary stakeholders

are relational based and lead to wealth creation.

This leads us to our next set of hypotheses;

H12a: CSR dimensions that are relevant to company's primary stakeholders positively impact the investment efficiency of the firms.

H12b: CSR dimensions that are relevant to company's secondary stakeholders do not impact the investment efficiency of the firms.

2.6 Summary of the Chapter

This chapter explains the theories that justify CSR disclosure by firms and the financial benefits these firms can achieve. Furthermore, the studies regarding the determinants and financial implications of CSR reporting have been reviewed. The institutional settings of China and Pakistan are described. Based on the literature review 12 main hypotheses are formed. The hypotheses of this study are summarized in Table 2.2.

TABLE 2.2: Anticipated relationship between Dependent and Independent variables

Drivers of CSR Disclosure quantity and quality	Variables	Anticipated relationship
Firm-specific features	Firm size	Positive relationship.
	Firm profitability	Positive relationship.
	Firm indebtedness	Negative relationship.
Governance structure	Board independence	Positive relationship.
	Board size	Positive relationship.
	Multiple directorships	Positive relationship.
	Political connection	Positive relationship.
Ownership structure	Institutional ownership	Positive relationship.
	Family ownership	Negative relationship.
Financial implications of CSR disclosure	Investment efficiency	Positive relationship.

Chapter 3

Methodology and Data

3.1 Introduction

As indicated previously, the objective of this study is to identify the antecedents and financial implications of CSR disclosure quality and quantity in Chinese and Pakistani listed firms. To achieve this prime objective, past studies were reviewed on the underpinning theories, the state of CSR reporting worldwide including China and Pakistan, and the drivers and financial implications of CSR disclosure.

This chapter explains the procedure of data collection and methodology employed to test the study hypotheses. More precisely, it explains the basis of data collection and measurement of dependent and independent variables. The chapter proceeds as follows. Section two elaborates on model specification, covers the research models, data sources and measurement of dependent, independent and control variables. Basic assumptions of multiple regression and endogeneity concerns are discussed in section three and four respectively. In the end, section five summarizes the chapter.

3.2 Model Specification

To analyse the hypotheses developed in this study, two research models are employed. The first research model will be used in two regression models to study

the impact of firm specific features, CG structure and ownership structure on CSR disclosure quantity and quality. In the first regression model CSR disclosure quantity will be the dependent variable whereas in the second model CSR disclosure quality will be used as a dependent variable.

In the second research model the financial implications of CSR disclosures will be analysed. The second research model will be divided in to eight regression models. The first regression model will study the association between CSR disclosure quantity and investment efficiency. The second regression model will study the impact of CSR disclosure quality on investment efficiency. The third and fourth models will investigate the impact of high vs. low quality disclosure on investment efficiency. Similarly, in the fifth and sixth regression models, the effect of primary vs. secondary stakeholders as a target of CSR disclosures on investment efficiency of firms will be analysed. This study employed Least Square Dummy Variable (LSDV) regression analysis to study the first research model and Logistic binary regression to study the second research model. The variables used in the regression models are summarized in Table 3 3. The results of first research model are reported in Chapter 4, whereas, Chapter 5 presents the results of second research model. Results are divided in two separate chapters because different methodologies are employed in the two research models. Secondly, the first model studies the determinants of CSR disclosure whereas second model analyses the impact of CSR disclosure on investment efficiency of the firms.

3.2.1 Determinants of CSR Disclosure

The proposed linear regression model employed to identify the determinants of CSR disclosure quantity has been estimated as,

$$\begin{aligned}
 DQt_{i,t} = & \beta_0 + \beta_1 Size_{i,t} + \beta_2 Prof_{i,t} + \beta_3 Indebt_{i,t} + \beta_4 Bind_{i,t} + \beta_5 BSize_{i,t} + \beta_6 MD_{i,t} \\
 & + \beta_7 PC_{i,t} + \beta_8 IO_{i,t} + \beta_9 Fam_{i,t} + IND\ dummies + YEAR\ dummies \\
 & + \varepsilon_{i,t}
 \end{aligned} \tag{1}$$

Similarly, regression model to find the determinants of CSR disclosure quality has been estimated as,

$$\begin{aligned}
DQI_{i,t} = & \beta_0 + \beta_1 Size_{i,t} + \beta_2 Prof_{i,t} + \beta_3 Indebt_{i,t} + \beta_4 Bind_{i,t} + \beta_5 BSize_{i,t} + \beta_6 MD_{i,t} \\
& + \beta_7 PC_{i,t} + \beta_8 IO_{i,t} + \beta_9 Fam_{i,t} + IND\ dummies + YEAR\ dummies \\
& + \varepsilon_{i,t}
\end{aligned} \tag{2}$$

Where DQt is the CSR disclosure quantity of a firm calculated from equation (1) and DQI is the quality of firm's CSR disclosure. Size is the size of firm, Prof is firm's profitability, Indebt. is the level of firm's debt holdings, Bind is board independence variable, BSize is the size of corporate board, MD is the other simultaneous directorships held by the board members, PC is the political connectedness of the board, IO is the ownership held by different institutions and Fam is ownership by the family members. Finally, industry (IND) and time (YEAR) dummy variables are used to control for fixed effects by checking whether the relationship holds across all years and industries.

3.2.2 CSR Disclosure and Investment Efficiency

The proposed binary logistic regression model employed to check the association between investment efficiency and CSR disclosure quantity has been estimated as below,

$$\begin{aligned}
IED_{i,t} = & \beta_0 + \beta_1 DQt_{i,t} + \beta_2 SLK_{i,t} + \beta_3 FS_{i,t} + \beta_4 LEV_{i,t} + \beta_5 SV_{i,t} + \beta_6 FD_{i,t} + IND\ dummies + \\
& TIME\ dummies + \varepsilon_{i,t}
\end{aligned} \tag{3}$$

CSR disclosure quantity has been replaced with CSR disclosure to quality in model (4) to study its impact on investment efficiency;

$$\begin{aligned}
IED_{i,t} = & \beta_0 + \beta_1 DQI_{i,t} + \beta_2 SLK_{i,t} + \beta_3 FS_{i,t} + \beta_4 LEV_{i,t} + \beta_5 SV_{i,t} + \beta_6 FD_{i,t} + IND\ dummies \\
& + TIME\ dummies + \varepsilon_{i,t}
\end{aligned} \tag{4}$$

In order to check the differing impact of high vs. low quality disclosure the regression models are estimated;

$$\begin{aligned}
IED_{i,t} = & \beta_0 + \beta_1 HDD_{i,t} + \beta_2 SLK_{i,t} + \beta_3 FS_{i,t} + \beta_4 LEV_{i,t} + \beta_5 SV_{i,t} + \beta_6 FD_{i,t} + IND\ dummies \\
& + TIME\ dummies + \varepsilon_{i,t}
\end{aligned} \tag{5}$$

$$\begin{aligned}
IED_{i,t} = & \beta_0 + \beta_1 LDD_{i,t} + \beta_2 SLK_{i,t} + \beta_3 FS_{i,t} + \beta_4 LEV_{i,t} + \beta_5 SV_{i,t} + \beta_6 FD_{i,t} + IND \text{ dummies} \\
& + TIME \text{ dummies} + \varepsilon_{i,t}
\end{aligned} \tag{6}$$

Similarly, in a bid to test the different effect of CSR disclosure targeted towards primary (HR & CUST) vs. secondary stakeholders (COM & ENV) on firm-level investment efficiency the following regression model is estimated;

$$\begin{aligned}
IED_{i,t} = & \beta_0 + \beta_1 COM_{i,t} + \beta_2 ENV_{i,t} + \beta_3 CUST_{i,t} + \beta_4 HR_{i,t} + \beta_5 SLK_{i,t} + \beta_6 FS_{i,t} + \beta_7 LEV_{i,t} + \\
& \beta_8 SV_{i,t} + \beta_9 FD_{i,t} + IND \text{ dummies} + TIME \text{ dummies} + \varepsilon_{i,t}
\end{aligned} \tag{7}$$

Where, IED is the dichotomous variable created based on the residuals from the investment model (equation 12), where 1 represent efficient investment and vice versa. DQt represents CSR disclosure quantity score, DQl represents CSR disclosure quality score, HDD represents high quality disclosures and LDD are low quality disclosures. COM and ENV represent CSR disclosures targeted towards secondary stakeholders whereas CUST and HR represent disclosures targeted towards primary stakeholders.

The rest are control variables that are found to effect investment efficiency: As a proxy for Slack (SLK), current ratio is used, which is measured as current asset by current liabilities. Log of age is used as a proxy for firm size (FS). Indebtedness (INDEBT) is measured by dividing total liabilities on total assets. Sales volatility (SV) measures the standard deviation of sales over the five previous years. The effect of firm's Financial distress (FD) is controlled by including Z-Score in the equation. To control for industry effects (IND), a dummy variable is used since it is possible for investment efficiency to fluctuate between industries. If the company is active in one of the industries, the dummy variable is assigned a value of 1 and zero otherwise. Year fixed effect (YEAR) is also controlled for any time trend present in the data. The positively (negatively) significant coefficients of different CSR disclosure variables show that high CSR disclosure by firms increases (decreases) their investment efficiency. As predicted in the hypotheses, a significantly positive β_1 is expected for DQt, DQl, HDD, CUST and HR whereas, negative insignificant β_1 for LDD, COM and ENV.

3.3 Measurement of Variables

3.3.1 Measurement of CSR Disclosure Quantity for China

Several methods are available which are generally used to evaluate the dynamics of CSR disclosure which includes ratings issued by reputational indices e.g. Fortune Reputation index, Milton-Moskowitz reputation index etc. There are also some other methods available which refer to company's rating approach e.g. Global Reporting Initiative Index (GRI), Kinder, Lydenberg, and Domini index (KLD), Dow Jones Sustainability Indices (DJSI) and RKS. Another method which is generally observed with regards CSR disclosure is survey based. In this third method the researcher gathers information in field surveys while using questioners and other such instruments to develop an independent CSR index. Fourth method is about using secondary data and performing content analysis in order to assess the level of sustainability activities.

In order to assign scores to Chinese firms on their CSR disclosure quantity the CSMAR dataset is employed. First, an index is created which is based on four subcategories which are included in the "Basic information of social responsibility reports of listed firms" of CSMAR database to measure CSR disclosure. These subcategories are disclosure related to community welfare, disclosure related to environmental protection, disclosure related to product/customers and disclosure related to human resource management of firms. An average score is calculated from the score of these subcategories. Finally, CSR disclosure quantity variable is represented by log of CSR score calculated.

3.3.2 Measurement of CSR Disclosure Quality for China

Rankins (RKS) database is employed to obtain CSR ratings of the sample firms, which has been widely used in CSR research of Chinese market (Liao et al., 2018). CSR disclosure quality variable is represented by log of CSR ratings released by RKS. RKS ratings system is designed after the KLD ratings of U.S. firms. It is built on GRI 3.0 guidelines after modifying it to Chinese context. In this ranking

system the CSR report of each firm is assessed by three experts who should meet two conditions. First, they should have minimum three years' experience in the field of CSR. Second, they should have no personal interest involving the firm they are assigning ranks. RKS is similar to KLD in that it is completely autonomous of the firms it ranks. The ranking is done by assigning a score to the CSR reports of firms by experts. CSR score assigned by Rankins CSR Ratings examine CSR report of a firm by three dimensions i.e.

1. Evaluation of CSR strategy and innovation (30%)
2. Disclosure content evaluation (50%)
3. Technical evaluation (20%)

Finally, CSR disclosure quality variable is represented by log of CSR score assigned to firms by RKS ratings.

3.3.3 Measurement of CSR Disclosure Quantity for Pakistan

The rating approach adopted for Chinese market is not possible for Pakistan because there are no CSR ratings available in case of Pakistani market to rank the CSR disclosure or performance of companies. Consequently, for Pakistan to fulfill the objective of quantifying the amount of CSR disclosure majority of the literature is followed and content analysis is used. The information regarding CSR is taken from annual and stand-alone reports of companies. The evidence in the CSR reporting literature suggests content analysis to measure CSR disclosure because it provides valid results (Gray et al., 1995). Therefore a detailed discussion is presented with regards the method selected in this study to measure disclosures.

3.3.3.1 Content Analysis

Content analysis method extends a contextual interpretation of the qualitative and quantitative information extracted from the data after coding and identification

of themes. This method is governed based on various units like number of words, sentences, lines paragraphs etc. in order to devise a content analysis process (Gray et al., 1995). In research, such methods are used for performing analysis on annual reports and standalone reports of the company (Sweeney & Coughlan, 2008). The process of content analysis is accomplished by gathering qualitative and quantitative data, which is further codified and categorized in certain pre-set criteria. The key benefits, which content analysis offers are:

- (a) Content analysis is considered to be an unobtrusive method for it examines secondary data. Since the collection of secondary data is independent of respondent's bias it makes the results more reliable.
- (b) The process of data collection can be made reliable through adopting validity and reliability check which are easy to maintain.
- (c) Content analysis offers a vast scope of application and the notable one is studying business ethics. The content analysis can be effectively used to analyze reports and news articles for studying a company's CSR communication.

The content analysis methodology employed in this study involved five key steps; identifying question(s) to be answered, deciding on sampling units to be analyzed, identifying content categories, defining the recording unit and finally coding of the data.

Step1: Identify Question(s) to be Answered

Content analysis begins with recognizing the queries to be solved. In this study, content analysis is employed to explore annual and standalone reports of firms to quantify the amount and quality of CSR information issued by firms.

Step2: Sampling Units for Analysis

The content analysis starts with the selection of unit, which is used for the analysis. Deciding on sampling unit is a crucial step in any research (Krippendorff, 1980).

Annual/standalone reports are widely used in CSR research because a). It is the most commonly available public document issued by the firms, b). Firms normally have complete authority over the issuance of this document, c). Firms are obliged by law to produce annual reports in many countries including Pakistan which makes it easy to compare disclosure between firms (Tilt, 1994).

Firms report regarding their social and environmental activities via different media sources for example Television, newspaper, promotional leaflets, websites, advertisements interim reports and annual/standalone reports. Hence, using annual reports only might result in incomplete portrayal of CSR disclosure (Unerman, 2000) because it is a small proportion of corporate communication channels (Islam & Deegan, 2010). On the other hand incorporating all CSR sources is unfeasible and impracticable (Zeghal & Ahmed, 1990). Firms' annual reports are usually fixed official archives which are easily accessible by general public (Cormier, 2011). Moreover, firm executives have full editorial authority over the content of annual reports (Guthrie & Parker, 1989). Guthrie and Abeysekera (2006) contend that the content management opt to include or exclude in the annual reports of firms is their deliberate choice that signals a substantial information to stakeholders. Moreover, annual reports can be considered as one of the most credible information means regarding any firm (Tilt, 1994). It is also a source most commonly used by different stakeholders to get information regarding financial performance, investment information and environmental activities of a firm (Deegan & Gordon, 1996). Moreover, annual report is the only source from which researcher can find rich and complete information regarding a firm (Crowther, 2004). Therefore, annual reports of firms from 2009-2017 are used to develop CSR disclosure index for this study.

Step 3: Identify Content Categories

On this step a researcher should decide whether the categories to be used would be mutually exclusive or not. Including an item in more than one category for statistical analysis would lead to unreliable conclusions. Moreover, a researcher has to define the categories very clearly on this step. Categories and coding schemes

can be identified from raw data, or adopted from preliminary model or theories. The key advantage of adopting coding categories from previous studies is that one can compare research results across different studies.

Based on research objectives constrained coding can be used as opposed to free coding in CSR content analysis, constrained coding is to code data on a pre-defined coding schemes. These pre-defined coding schemes are usually adopted from literature, national or international standards or relevant documents like GRI guidelines.

In CSR disclosures literature the researchers have used various categories to classify the information. Some researchers have utilized the categories developed by previous studies for example Benlemlih and Bitar (2018) used the categories of community, diversity, employee relations, environment, product characteristics and human rights. Ali, Faisal Alsayegh, Ahmad, Mahmood, and Iqbal (2018) used the categories of environment, human resource, products and consumers, community involvement and general. Muttakin, Khan, and Mihret (2018) employed the categories of community related disclosures, environment related disclosures, product related disclosures and value addition related disclosures. Malik and Kanwal (2018) utilized the categories identified by Gray, Kouhy, and Lavers (1995) i.e. environment, community, human and consumers and products. Cucari, Esposito De Falco, and Orlando (2018) employ three areas of CSR disclosure; environment, social and governance. Verbeeten, Gamerschlag, and Mller (2016) used two categories to classify CSR disclosures i.e. environmental and social. Research shows that to measure CSR rightly a clear definition of this concept and comprehensive explanation of its categories play a vital role (Gray et al., 1995). Following the previous literature, this study employed the CSR categories suggested by Gray et al. (1995). The categories suggested by Gray et al. (1995) is used by Ramdhony (2017) in Mauritius, similar categorization is employed in this study for Pakistani firms.

This study will perform content analysis, using scores for quantity and quality of CSR information. An approach is adopted based on four themes of CSR, which are explained below:

- (i) Environment: The environment means, how does the scope of operations of a firm effect the environment. These efforts include controlling the emission of chemicals into the air or water, implementation of environmental protection rules and regulations and other measures.
- (ii) Human resource: This theme considers the social welfare of the employees in the company by offering them training program, improved working conditions, job enrichment schemes and employees' pension plan etc.
- (iii) Community: The theme scopes the activities relevant to education, cultural activities, safety, health and sponsoring sports.
- (iv) Product & customer care: This theme includes the measures relevant to the customer's satisfaction, feedback, health, product quality etc.

Step 4: Defining the Recording Unit

CSR disclosure can be measured using content analysis in numerous ways. These techniques can be classified in two major categories namely volumetric approach also known as disclosure abundance and index approach also known as disclosure occurrence (Joseph & Taplin, 2011). Disclosures can be measured with volumetric approach by counting the units, which can be words, sentences, paragraphs or pages (Joseph & Taplin, 2011). On the other hand Index approach measures disclosure by first identifying items to measure some concept precisely and in a specific perspective. Next step is to assign a score on all of the pre-selected items. Nonetheless this approach is criticized for its subjective nature.

This study employs index approach to quantify the extent and quality of CSR disclosure provided by firms. The employed approach is consistent with studies by Malik and Kanwal (2018), Shahzad, Rehman, Nawaz, and Nawab (2018) and Gjlberg (2009).

Step 5: Coding of Data

The first step for both index and volumetric approach is a checklist of items. The checklist was developed by reviewing the annual reports of firms with top CSR

performance in social and environmental responsibility and GRI guidelines on how to report about CSR related activities. The basic condition of including any item in the checklist was if at least three firms reported it in their annual reports. Finally a checklist comprising of four main areas of CSR disclosure (Community, Environment, Customer and Human resource) was developed.

Next step is to decide on the coding methodology. CSR literature normally employs a dichotomous coding procedure where a score of “1” is given if an item from the checklist is present in the annual report of the firm no matter how detailed or summarized the disclosure is. Whereas, a score of “0” is assigned to a firm when no relevant disclosure is found. However this study takes a similar approach as Wiseman (1982), where a firm is assigned a point of 0 if no disclosure is made. A score of 1 is assigned if a general statement is made. 2 shows a more specific disclosure but qualitative in nature. A score of 3 shows disclosure is a mix of quantitative and qualitative data. In line with the previous studies, this thesis employs the formula to build the index which quantifies the CSR reporting quantity.

$$DQt_{i,t} = \frac{\sum_{t=0}^n X_{i,t}}{M_{i,t}} \quad (11)$$

DQt_i = CSR disclosure of i^{th} firm;

M_i = maximum expected score for each category of firm i

$X_{i,t}$ = score obtained by the firm

An unweighed index approach is followed on the assumption that all categories of CSR reporting are equally important. Using unweighed index is a common approach in CSR literature because there is subjectivity involved in assigning weights to the index categories (Marston & Shrives, 1991).

Step 6: Generalizing the Results

Normally to generalize the findings, the reliability and replicability of the results are either ensured by employing multiple coders (Gray et al., 1995) or warranted by reporting that the discrepancies between multiple coders are few. In addition,

the reliability of the coding instrument is ensured by developing well specified decision categories and rules.

TABLE 3.1: CSR Disclosure Quantity Index (Pakistan)

Disclosure Themes and Indicators
<i>Product & Customer related disclosure</i>
<ul style="list-style-type: none"> o Info about types of product & services. o Research & Development. o Product Improvement. o Product Safety standards disclosed. o Sanitary procedures followed in production. o Product quality & safety. o Improvement in customer services. o Consumer protection measure.
<i>Community related disclosure</i>
<ul style="list-style-type: none"> o Sponsoring educational Institution (s). o Scholarship program. o Community support & uplift. o Public Health related activities. o Establishment/funding of hospital. o Recreation Clubs, parks & public libraries. o Part-time employment of students. o In-kind donations. o Rehabilitation of disaster affectees. o Technical/vocational training programs. o Rural development programs. o Charitable foundation/ trust. o Clean water provision for communities. o Contribution to national exchequer.
<i>Environment related disclosure</i>
<ul style="list-style-type: none"> o Environmental protection policy disclosure. o Waste management. o Product impact on environment. o Air emission information. o Air emission processing. o Water discharge information. o Effluent treatment. o Recycling of waste products. o Solid waste disposal. o Pollution -prevention technologies. o Conservation of natural resources. o Land reclamation & forestation programs. o Energy saving & conservation. o Energy production. o Direct energy use. o Compliance with environmental standards.

Employees related disclosure

- o Firm's relationship with labor unions.
 - o Equal Employment opportunity.
 - o Sports/fun activities.
 - o Reduction of pollutants in work place.
 - o Discussion of accidental statistics.
 - o HSE certification.
 - o Receiving a safety (HSE) award.
 - o Medical surveillance.
 - o HSE trainings.
 - o Human Resource Development.
 - o Educational Facilities.
 - o Facility of day-care, maternity leaves.
 - o Hajj sponsorship.
-

Reliability of content analysis can be confirmed by checking it for stability, reproducibility and accuracy (Krippendorff, 1980). Where stability means that the coder is capable of coding it in the similar manner over a period of time. To check stability the coder codifies the same text three weeks later, for stability to be perfect the results should match exactly. Reproducibility also known as inter-rater reliability refers to the degree of similar results of coding procedure when coded by different coders. Reproducibility is measured through evaluating the ratio of coding errors amongst multiple coders. Finally, to evaluate the coding performance by coders with some pre-defined standard developed from previous studies. Data on CSR disclosure will be gathered from company's annual report and CSR reports by employing content analysis. To quantify the extent of disclosure, companies would get score based on their rank on corporate social responsibility disclosure index (Table 3 1) designed in this study.

3.3.4 Measurement of CSR Disclosure Quality for Pakistan

It is important to study disclosure quality separate from disclosure quantity because sometimes there is a clear disconnect between quantity and quality of disclosure, as articulated by Michelon et al. (2015) that U.K. companies abuse the CSR reporting tools i.e. stand-alone reports, assurance and reporting guidance.

In their study they found that companies use these practices symbolically and using these practices doesn't assure a quality information disclosure. In the same vein, Romolini, Fissi, and Gori (2014) used inductive method to score and assess the maturity and indicators disclosed in CSR reporting in Italy by FTSE ECPI (Financial Times Stock Exchange) Leaders Index. They found a good level of disclosure but their results suggested that CSR is considered more of a fashion in that market rather than a responsibility.

There is no universally accepted notion of disclosure quality (Michelon et al., 2015). Therefore, the majority of previous empirical studies used disclosure quantity as a proxy for disclosure quality (Hassan & Marston, 2019). Few studies used forward-looking statements as a substitute of disclosure quality (Hussainey & Walker, 2009) but later researchers opposed this method of using quantity as a proxy for quality by arguing that quantity is indeed one of the determinants of quality but not a proxy of quality (Anis, Fraser, & Hussainey, 2012). Anis et al. (2012) tested UK market and found that companies disclosing more information don't necessarily mean that the information is accurate too. Therefore, a disclosure quality Index is designed to rank companies on the quality of CSR information provided instead of using quantity as a substitute for it. This disclosure quality index is developed on the basis of GRI indicators for the reason that the number of information items that make up disclosure index and its selection criteria is not agreed upon in the literature (Wallace, Naser, & Mora, 1994). The earlier studies employed varied number of disclosure items i.e. 17 to 530 (Barrett, 1976; Craig & Diga, 1998), which show variances in institutional settings from where the data was employed (Patel, 2003). Consistent with Clarkson et al. (2008) this study uses GRI G3.1 guidelines which comprises of a detailed checklist of items for the following reason,

- (a) The use of this well-established checklist will enhance the reliability of resultant disclosure index.
- (b) The GRI is arguably the most widely practiced framework of sustainability reporting around the world (Chen et al., 2015). According to a survey conducted in 45 countries by KPMG in 2015, GRI application rate is 72% for

stand-alone sustainability reports. The survey also found that use of GRI guidelines is increasing in Asia Pacific region.

GRI (2006) reporting guidelines comprise of six themes which can be represented by 79 indicators. This checklist was further edited (items were added/deleted) based on extensive survey of relevant literature (Hassan & Ibrahim, 2012). The criteria for inclusion in the index would be as follow

- (a) The item should have been appeared in published articles.
- (b) The item should have been disclosed by at least three or more sampled companies (non-applicable items would be deleted from initial list).

GRI has the honor of being an internationally recognized framework for CSR reporting (Frost, Jones, Loftus, & Van Der Laan, 2005). Furthermore, an internationally recognized framework of CSR disclosure allows reproducing the study and analyzing the results with new dimensions. In addition, GRI is a comprehensive framework which encompasses social, economic and environmental performance. Conclusively, GRI is the latest and innovative measure of CSR reporting. Numerous studies have used GRI framework to develop disclosure indices (Mohammad & Mishiel, 2019).

Although, there does not exist a broadly accepted sustainability reporting quality index but the existing literature differentiates between “low quality disclosures”, characterized by general, non-verifiable statements and “high quality disclosures” regarded as being explicit, specific and verifiable (Brammer & Pavelin, 2008b; Cormier et al., 2005; Van der Laan Smith, Adhikari, & Tondkar, 2005). Thus in order to quantify CSR disclosure quality an index is developed by taking assistance from GRI sustainability reporting guidelines about characteristics of information quality, Clarkson et al. (2008)s environmental reporting index and Sutantoputra (2009)s social disclosure index. The non-mandatory requirement of CSR reporting is taken in to consideration while developing the index. Moreover the utilization of well-established indices to collect data increases the reliability of the content analysis process. Nine criteria used to assess the quality of company’s CSR reporting are listed below in Table 3 2.

TABLE 3.2: CSR Disclosure Quality Index (Pakistan)

Sr. No.	CSR Disclosure Quality Items
1	Sustainability reporting guidelines followed (GRI, UNGC principles of “Communication on Progress” (CoP) etc.)
2	Independent assurance of sustainability report (by PwC Pakistan, Corporate Social Responsibility Centre Pakistan (CSRCP) etc.)
3	Stakeholder engagement in sustainability reporting procedure.
4	Product certification with respect to safety or environmental impact (Quality Management System ISO 9001 & Environmental Management System ISO 14001 etc).
5	CSR/HSE- award received.
6	Working with labor/environmental organizations to improve labor/environmental practices.
7	Certification by environmental/labor agencies.
8	Independent audits carried out on social or ecological performance.
9	Disclosure of implicit CSR targets.

The quality of a report is ranked by allocating a score in the presence of above mentioned quality. If all the qualities are present in a report it is allocated 9 score in total (100%). To transform this score in to continuous data the total score obtained in divided by the maximum score attainable i.e. 9.

3.3.5 Measurement of Firm Size

Log of total assets is used as a proxy for firm size to standardize absolute values of total assets and to evade the non-normality of the distribution (Garcia-Ramos & Garcia-Olalla, 2011). Finance literature has used total assets as a proxy of firm size because the more assets a firm has the larger is its size.

$$Size_{i,t} = \log (Total Assets)$$

3.3.6 Measurement of Firm Profitability

The profitability of companies is controlled by including Return on Asset as its proxy, which is calculated as earning before interest and taxes divided by total assets. In financial management literature it is one of the commonly used proxy of firm profitability (Cho, Chung, & Young, 2019).

$$Prof_{i,t} = \frac{\text{Earnings before Income and Tax}}{\text{Total Assets}}$$

3.3.7 Measurement of Firm Indebtedness

Firm's indebtedness (INDEBT) is measured as the quotient between total liabilities and total assets (Arora & Dharwadkar, 2011).

$$INDEBT_{i,t} = \frac{\text{Total liabilities}}{\text{Total Assets}}$$

3.3.8 Measurement of Independent Board

CCG of Pakistan advocates board independence and clearly states that one third of the listed companies' board shall comprise of independent members. However, this requirement became mandatory in 2013, therefore non-executive directors are considered as independent directors before 2013. A dummy variable is created on the basis of this one-third criterion, where it is coded as 1 if more than third of the board is comprised of non-executive directors (before 2013) and independent non-executive directors (after 2013) and 0 otherwise (Garca-Ramos & Garca-Olalla, 2011).

3.3.9 Measurement of Board Size

To measure the size of board the total number directors on the board are counted (Giannarakis, 2014). These directors include both executive as well as non-executive directors.

3.3.10 Measurement of Multiple Directorships

Following Haque (2017) the multiple directorships (MD) is measured as natural log of average number of other directorships held by board members.

$$MD_{i,t} = \text{Log} (\text{Avg. no. of other directorships held by board members})$$

3.3.11 Measurement of Political Connectedness

The literature normally uses two datasets to identify political connectedness of a firm. In this method the names of board members from first dataset comprising of firm level information are searched in the second dataset which contains the information regarding politicians profile. If any member is found in both datasets then he/she is identified as politically connected. For China the names of board members are taken from CSMAR database and the dataset used to cross-check the political affiliation is the China Political Elite Database (CPED). For Pakistan the names of board members are taken manually from the annual reports of firms and cross checked from the list of politicians on Election Commission of Pakistans website. Following (Rahman & Ismail, 2016), political connectedness is measured with a dichotomous variable. Where, “1” means the director has some political connection and “0” means the director is not politically connected.

3.3.12 Measurement of Institutional Ownership

Institutional ownership is calculated as a percentage of shares held by institutional investors (Hu et al., 2018).

$$IO_{i,t} = \text{Percentage shares held by institutional investors}$$

3.3.13 Measurement of Family Ownership

Majority of the businesses worldwide are run by a dominant shareholder, typically families (Faccio & Lang, 2002). Surprisingly, U.S. and U.K. where ownership is widely diffused, family members exercise a significant control over a good number of largest corporations (Ali, Chen, & Radhakrishnan, 2007). The proxy used for family firms is the family ownership because ownership stake reflects the power an

owner holds to influence management decisions (Shleifer & Vishny, 1986). Following Jaggi, Leung, and Gul (2009), a firm is classified as family led at a cutoff of 20% ownership. A dummy variable (Fam) equals 1 if more than 20% ownership belongs to family members and 0 otherwise.

3.3.14 Measurement of Industry Dummies

To control for industry effects, a dummy variable is used since it is possible for CSR performance to fluctuate between industries. If the company is active in one of the industries, the dummy variable is assigned a value of 1 and 0 otherwise (Garca-Ramos & Garca-Olalla, 2011).

3.3.15 Measurement of Time Dummies

To control for time effects, a dummy variable is used since it is possible for CSR performance to fluctuate between different years. A score of “1” is assigned if the data belongs to one of the years and 0 otherwise to control for any time trend present in the data (Garca-Ramos & Garca-Olalla, 2011).

The definition and calculation of variables for Model 1 are explained in Table 3 3.

3.3.16 Measurement of Investment Efficiency

Investment efficiency is defined as a capability of firm to invest in all the projects with positive NPV. Equation 12 is used in this thesis to estimate the optimum investment rate. For this purpose the sales growth of previous year is regressed on total investment of current year.

$$Investment_{i,t} = \beta_0 + \beta_1 Sales\ growth_{i,t-1} + \epsilon_{i,t} \quad (12)$$

Where $Investment_{i,t}$ represents the yearly t investment by a company i in assets divided by total assets of previous year. $Sales\ growth_{i,t-1}$ is the ratio of increase

TABLE 3.3: Definition of Variables for Model1

Variable Name	Variable Definition	Variable Measurement
DQt	CSR disclosure quantity	Log of CSR disclosure quantity score
DQl	CSR disclosure quality	Log of CSR disclosure quality score
SIZE	Firm size	Log of Total assets (Garca-Ramos & Garca-Olalla, 2011).
PROF	Firm profitability	EBIT/ Total assets (J. S. Cho et al., 2019)
INDEBT	Firm indebtedness	Total liabilities/ Total assets (Garca-Ramos & Garca-Olalla, 2011).
BIND	Board independence	1= if 1/3rd board in independent & 0 otherwise (Garca-Ramos & Garca-Olalla, 2011).
BSIZE	Board size	Log of total number of directors on the board (Gianarakis, 2014).
MD	Multiple directorships	Log of average number of other directorships held by board members (Haque, 2017)
PC	Political connection	1= if board is politically connected & 0 otherwise (Rahman & Ismail, 2016)
IO	Institutional ownership	%age shares held by institutional owners (Hu, Zhu, Tucker, & Hu, 2018).
FAM	Family ownership	1= if more than 20% ownership belongs to family members and "0" otherwise (Jaggi, Leung, & Gul, 2009b).
IND	Industry dummies	"1" is assigned if the co. is active in one of the industries and 0 otherwise (Garca-Ramos & Garca-Olalla, 2011).
TIME	Time dummies	"1" is assigned if the data belongs to one of the years and 0 otherwise (Garca-Ramos & Garca-Olalla, 2011).

or decrease in sales from year t-2 to t-1. Equation 12 is constructed on the basis of neo-classical theory (Tobin, 1969). This theory argues that in the case of perfect efficient market the marginal Q ratio can be taken as a representative of firms investment. Nevertheless this thesis employs ratio of increase in sales as a representative of firm prospective investment opportunity. When the sales of a firm increase it shows that there would be higher demand of firms product/service in the future. This makes it mandatory for a firm to meet this demand by enhancing the production of its goods/services, which would need additional investments. Following the contemporary literature this thesis measured investment inefficiency as a deviance from optimum investment level. The error terms of equation 12 represents this deviation, where a positive residual indicates over investment and negative residual shows underinvestment. The error terms of equation 12 represents

this deviation, where a positive residual indicates over investment and negative residual shows underinvestment.

This thesis used Logistic regression methodology, in which the response variable should be dichotomous in nature. Hence, the companies with zero residual are allotted a score of 1 which shows that they are efficient ones. On the other hand firms with non-zero residuals whether they are positive or negative, a score of 0 is allotted.

3.3.17 Measurement of High and Low Quality Disclosures

Following Cureton (1957), the samples are grouped and ranked by the quality of their CSR reporting. The upper 27% consists of firms with high quality disclosures (HDD) and the lower 27% are grouped as low disclosure quality (LDD) firms. the firms are divided in to high and low disclosure groups to identify whether they impact investment efficiency differently or not.

3.3.18 Measurement of CSR Disclosure Target

Information disclosed under the subcategories of community, environment, product & customer care, and human resource are taken as a proxy for CSR targeted towards that specific group e.g. disclosure related to Human Resource category is a proxy for CSR targeted towards Employees (Muttakin, Khan, & Mihret, 2018).

3.3.19 Measurement of Control Variables (Investment Efficiency and CSR)

Numerous researchers suggested that the association of CSR disclosure and investment efficiency depends upon some factors (Benlemlih & Bitar, 2018; Bhandari & Javakhadze, 2017; Cook et al., 2019; Shahzad et al., 2018). Research shows that there is association between firm slack and firm size with investment efficiency (Biddle et al., 2009; Gomariz & Ballesta, 2014; Zhong, 2017). Recently Shahzad et al. (2018) argued that investment efficiency of a firm is associated with its

slack resources because managers in firms with slack resources are able to devote resources to positive NPV projects.

Therefore, following the literature on investment efficiency, the regression model in this study employed various control variables to separate the effect of CSR disclosure on investment efficiency of companies for instance slack, firm size, firm indebtedness, sales volatility, financial distress, industry belonging and time.

The variables of firm size, firm indebtedness, industry belonging and time trend are explained earlier. As a proxy for slack, current ratio is used, which is measured as current asset by current liabilities.

$$SLK_{i,t} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

Moreover, sales volatility measures the standard deviation of sales over the five previous years (Gomariz & Ballesta, 2014). Finally, following Altman (1968) financial distress is measured by Z-Score. The definition and calculation of variables for Model 2 are explained in Table 3 4.

TABLE 3.4: Definition of Variables for Model2

Variable Name	Variable Definition	Variable Measurement
DQt	CSR disclosure quantity	Log of CSR disclosure quantity score.
DQl	CSR disclosure quality	Log of CSR disclosure quality score.
HDD	High Disclosure Dummy	Top 27% observations of DQl (Cureton, 1957).
LDD	Low Disclosure Dummy	Bottom 27% observations of DQl (Cureton, 1957).
COM	Community related disclosure	Info. disclosed under the category of community (Muttakin et al., 2018).
ENV	Environment related discl.	Info. disclosed under the category of environment (Muttakin et al., 2018).
CUST	Product& customer related discl.	Info. disclosed under the category of product and customer care (Muttakin et al., 2018).

Variable Name	Variable Definition	Variable Measurement
HR	Employees related disclosure	Info. disclosed under the category of employees (Muttakin et al., 2018).
IED	Investment efficiency	IED is created based on the residuals from the investment model (Biddle et al., 2009).
SLK	Financial slack	Current assets/ Current liabilities (Shahzad et al., 2018).
SIZE	Firm size	Log of Total assets (Garca-Ramos & Garca-Olalla, 2011).
INDEBT	Firm indebtedness	Total liabilities/ Total assets (Arora & Dharwadkar, 2011).
SV	Sales volatility	Standard deviation of sales over the five previous years (Gomariz & Ballesta, 2014).
FD	Financial distress	Z-score (Altman, 1968).
IND	Industry dummies	“1” is assigned if the co. is active in one of the industries and 0 otherwise (Garca-Ramos & Garca-Olalla, 2011).
TIME	Time dummies	“1” is assigned if the data belongs to one of the years and 0 otherwise (Garca-Ramos & Garca-Olalla, 2011).

3.4 Data

3.4.1 Sample

The sample consisted of A-shares listed firms on Shenzhen and Shanghai Stock Exchanges and all non-financial companies that are listed on Pakistan Stock Exchange and reported on their CSR performance either in their annual reports or issued a standalone report.

In case of Chinese data, after dropping observations with omitted variables, a final sample of 396 firms (3,564 firm year observations) is used for analysis. Whereas, there were total of 220 Pakistani firms reporting their CSR activities in 2017, so they all are taken as a sample of this study. That makes 1,980 firm year observations, which represent 220 (47%) listed non-financial Pakistani firms between 2009 and 2017. This study period starts from 2009 because

1. A General Order by SECP (Securities and Exchange Commission of Pakistan) was issued in 2009 asking companies to voluntarily disclose (in descriptive and monetary terms) their CS activities in the director's report. Later SECP issued Corporate Social Responsibility Voluntary Guidelines in 2012, guiding companies how to ensure transparency and accountability in executing the social and environmental activities.
2. In 2008, it became mandatory for a subset of firms listed on Shenzhen and Shanghai Stock Exchanges to report on their sustainability performance.

Therefore, considering post-reform data as a starting point of our research will increase the validity and accuracy of the results (Ma, Ma, & Tian, 2017).

Reason behind selecting only non-financial firms for the study is firstly the difference of business nature which is not quite comparable with other firms and secondly they report under different reporting rules and they have different accounting rules. The PSX industry classification is used and firms are grouped in to 26 industries as shown in Table A 2.

The Pakistani firms were categorized in to industries namely, Textile spinning, Sugar & Allied, Chemical, Textile composite, Cement, Food & Personal Care, Power generation & Distribution, Fertilizer, Engineering, Miscellaneous, Pharmaceuticals, Auto assembler, Paper & Board, Textile weaving, Auto parts & accessories, Oil & Gas marketing, Glass & Ceramics, Synthetic & Rayon, Refinery, Oil & Gas exploration, Cable & Electrical, Transport, Technology & Communication, Leather & Tanneries, Woolen, Vanaspati & Allied.

The industry classification of the Chinese sample firms is presented in Table A 1. The Chinese firms are grouped in to industries based on industry classification designed by China Securities Regulatory Commission (CSRC) which is a major regulatory authority supervising the industrial securities. This classification is extracted from CSMAR database. The name of industries are described in Table A1.

For Pakistani data the companies' websites were used to download the annual/-standalone reports of the firms, whereas Financial Statement analysis annually

issued by State Bank of Pakistan was used to sort down the financial data of companies. Whereas, the Data on CG variables such as board independence, multiple directorships, board size, family directorships, institutional ownership and CEO duality are manually collected from companies' annual reports.

The sample of this study was consisted of somewhat similar markets because of comparability of results as CSR disclosure differs between countries.

3.5 Basic Assumptions of Multiple Linear Regression

The basic assumptions of multiple linear regression must be satisfied before performing the analysis otherwise the estimates would be biased. These assumptions are normality, autocorrelation, multi-collinearity, heteroskedasticity, linearity and sample size. The mentioned assumptions have been tested by employing various statistical tests. Starting with normality, the normality of the residuals is checked by Kernel density curve. Second, the assumption that the error terms are uncorrelated with each other is being checked by applying the Durbin-Watson test. Third, the Spearman correlation coefficient, Variance Inflation Factor (VIF) and Tolerance statistics (TOL) are used to ensure the absence of multicollinearity among the independent variables. Fourth, Breusch-Pagan test is used to deduce the presence of heteroskedasticity. Finally, unit root in the series has been investigated by applying the Augmented Dickey-Fuller test. The results of above mentioned tests are presented in chapter 4.

3.6 Robustness Check

Endogeneity refers to a statistical issue which can result from omitted variable bias, measurement errors and simultaneity. The validity of observed statistical results can become problematic if data suffers from the issue of endogeneity. In this regard, the study uses panel data of 9 years to test the hypotheses. Larcker and

Rusticus (2007) recommend using panel data as it help in mitigating the problem of endogeneity. Finally, omitted variable bias is checked statistically. Hence, the listed measures are expected to limit the effects of endogeneity.

3.7 Summary of the Chapter

A detailed discussion is presented in this chapter with regards the methodology employed by this study. The procedure of content analysis to collect data regarding CSR disclosure is explained in detail. The chapter also includes explanation regarding dependent, independent and control variables of the study. Further the use of annual reports as a source to collect data regarding CSR disclosure is justified. Moreover, the chapter elaborates on the research models and measurement of all the variables in these models.

Chapter 4

The Determinants of CSR

Disclosure Quantity and Quality

4.1 Introduction

This chapter discusses the empirical results regarding the determinants of CSR disclosure quantity and quality in China and Pakistan. The chapter is divided in two sections, section 1 explains the descriptive statistics of the results. Section 2 presents the multivariate analysis results and identifies the determinants of CSR disclosure quantity and quality in China and Pakistan.

4.2 Descriptive Analysis of CSR Disclosure Quantity and Quality Variables

Table 4.1 and Table 4.2 show the development of CSR disclosure for the years 2009-2017 in China and Pakistan. Comparing 2009 to 2017, it can be seen that the trend of disclosure quantity and quality is increasing. Tables also provide descriptive statistics for the CSR disclosure variables. In China, the mean score for DQt was 0.60 which shows that over the study period, DQt for companies averaged about 0.60. Whereas a standard deviation of 0.28 implies that the Chinese firms show significant variation regarding their CSR disclosure quantity. The mean

score for DQI was 0.42 which shows that over the study period, DQI for Chinese firms averaged about 0.42. Whereas a standard deviation of 0.21 implies that the disclosure quality of Chinese firms was quite similar. The low average of DQI variables as compare to DQt variables of China and Pakistan show that as compare to the level of disclosure, few companies issued good quality disclosure and the wide variations present within the DQt scores show that there exists a high degree of heterogeneity among sampled firms over the level of disclosures.

TABLE 4.1: Descriptive Statistics of CSR Disclosure (China)

Disclosure Quantity					
Year	Mean	Std. Dev.	Min.	Max.	Obs.
2009	0.497	0.273	0	1	396
2010	0.598	0.279	0	1	396
2011	0.6	0.278	0	1	396
2012	0.606	0.275	0	1	396
2013	0.608	0.287	0	1	396
2014	0.607	0.285	0	1	396
2015	0.613	0.292	0	1	396
2016	0.614	0.285	0	1	396
2017	0.717	0.287	0	1	396
Full sample	0.607	0.283	0	1	3564
Disclosure Quality					
Year	Mean	Std. Dev.	Min.	Max.	Obs.
2009	0.301	0.193	0	1	396
2010	0.412	0.203	0	1	396
2011	0.417	0.208	0	1	396
2012	0.422	0.216	0	1	396
2013	0.425	0.219	0	1	396
2014	0.429	0.218	0	1	396
2015	0.43	0.226	0	1	396
2016	0.431	0.217	0	1	396
2017	0.539	0.227	0	1	396
Full sample	0.425	0.216	0	1	3564

Figure 4.1 and Figure 4.2 show CSR disclosure trends of Chinese firms over the years. These figures demonstrate that over the past nine years, the firms in China

have improved their disclosure quantity and quality as well. The possible reasons behind this trend can be;

- Issuance of guidelines for listed firms on CSR disclosure by regulatory bodies
- Punishing firms with negative CSR actions e.g. pollution generation, by blacklisting them
- Conditioning bank financing with the sustainability performance of a company
- Encouraging socially responsible firms with CSR awards etc.

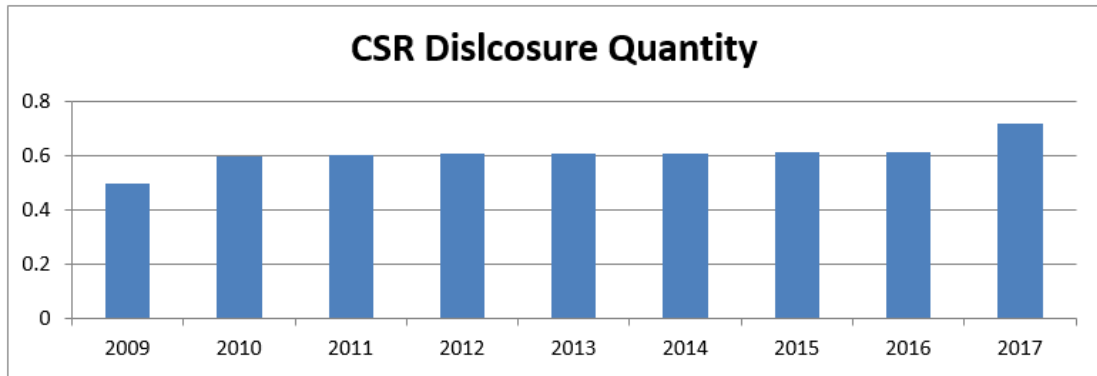


FIGURE 4.1: Trend of CSR Disclosure Quantity (China)

The figures show that firms reporting on CSR with an average CSR disclosure quantity score of 0.497 and CSR disclosure quality score of 0.3001 in 2009 increased to an average score of 0.717 and 0.539 respectively in 2017. This shows 44.26% increase in disclosure quantity and 79.06% increase in disclosure quality score. The reason behind this trend can be the design and implementation of appropriate rules and policies regarding sustainability disclosures for example, in 2008, the Chinese Ministry of Environmental Protection disseminated a set of guidelines to strengthen the management and monitoring with regards environmental protection of companies.

Likewise, in Pakistan the mean score for DQt was 0.56 which shows that over the study period, DQt for companies averaged about 0.56. Whereas a standard deviation of 0.57 implies that the companies show significant variation regarding



FIGURE 4.2: Trend of CSR Disclosure Quality (China)

CSR disclosure quantity. The mean score for DQI was 0.15 which shows that over the study period, DQI for companies averaged about 0.15. Whereas a standard deviation of 0.16 implies that the disclosure quality of Pakistani firms was quite similar.

TABLE 4.2: Descriptive Statistics of CSR Disclosure (Pakistan)

Disclosure Quantity					
Year	Mean	Std. Dev.	Min.	Max.	Obs.
2009	0.356	0.461	0	0.74	220
2010	0.452	0.49	0	0.69	220
2011	0.514	0.559	0	0.79	220
2012	0.549	0.578	0	0.87	220
2013	0.583	0.582	0	0.91	220
2014	0.606	0.578	0	1	220
2015	0.634	0.607	0	1	220
2016	0.681	0.637	0	1	220
2017	0.678	0.602	0	1	220
Full Sample	0.565	0.571	0	3	1980
Disclosure Quality					
Year	Mean	Std. Dev.	Min.	Max.	Obs.
2009	0.086	0.127	0	0.625	220
2010	0.114	0.141	0	0.732	220
2011	0.128	0.155	0	0.696	220
2012	0.143	0.157	0	0.714	220
2013	0.155	0.162	0	0.767	220
2014	0.171	0.169	0	0.821	220
2015	0.175	0.168	0	0.803	220
2016	0.187	0.178	0	0.857	220
2017	0.189	0.17	0	0.803	220
Full Sample	0.15	0.162	0	0.857	1980

Figure 4.3 and Figure 4.4 show that firms reporting on CSR with an average CSR disclosure quantity score of 0.356 and CSR disclosure quality score of 0.086 in 2009 increased to an average score of 0.678 and 0.189 respectively in 2017. This shows 134% increase in disclosure quantity and 119% increase in disclosure quality score. This notable increase can be attributed to the SECP's General Order passed in 2009, asking companies to make disclosures regarding their CSR performance.



FIGURE 4.3: Trend of CSR Disclosure Quantity (Pakistan)

Moreover, it can be noted that the growth in the scores of CSR disclosure is sluggish. The plausible reason attributed towards this behavior of Pakistani firms maybe due to the fact that there has been no guideline from SECP on how to disclose sustainability information.



FIGURE 4.4: Trend of CSR Disclosure Quality (Pakistan)

4.3 Descriptive Analysis of Independent Variables

Table 4.3 and Table 4.4 present the descriptive statistics of the explanatory variables of model 1. To control for the effect of outliers all continuous variables are winsorized at 1% and 99% of the distribution. The average value of firm size is 15.573 for Pakistani firms and 20.39 for Chinese firms which shows that on average there are large sized corporations in the sample from China as compare to Pakistan. Similar is the case with firm profitability i.e. 0.053 for Pakistani firms and 0.136 for Chinese firms. On the contrary the average debt burden on Chinese firms is high with the value of 0.329 than Pakistan with the average of 0.165.

TABLE 4.3: Descriptive Statistics of CSR Disclosure Determinants (Pakistan)

Variable	Mean	Std. Dev.	Min.	Max.	Obs.
SIZE	15.573	1.495	10.763	20.256	1980
PROF	0.053	0.105	-0.732	1.069	1980
INDEBT	0.165	0.145	0	1.236	1980
BIND	0.11	0.143	0	1	1980
BFSIZE	8.024	1.487	5	16	1980
MD	1.281	0.513	0.8	2	1980
PC	0.103	0.304	0	1	1980
IO	9.203	22.57	0	98	1980
FAM	0.357	0.289	0	1	1980

Variables are size of firm (SIZE), firms profitability (PROF), level of firms debt holdings (INDEBT), board independence (BIND), size of corporate board (BFSIZE), other simultaneous directorships held by the board members (MD), political connectedness of the board (PC), ownership held by different institutions (IO) and ownership by the family members (FAM).

With regards the Governance structure variables the values show that firms in China have more independent boards with an average of 0.149 as compare to Pakistan with an average of 0.110. Board size vary between 5 to 16 in Pakistan and 7 to 16 in China because of the relevant restrictions on firms on keeping a minimum and maximum number of directors in the board. The directors in Pakistani listed firms engage in more simultaneous directorships with an average score of 1.281 then Chinese listed firms having average score of 1.042. The possible explanation behind this is the policy regarding maximum directorships a member of board can hold in Pakistani was seven till 2017 as compare to five in China.

Moreover, on average 2.7% firms of China are politically connected whereas 10% of our sample firms from Pakistan have political affiliations.

With respect to ownership structure, the ownership by institutions varies between 0 to 98% in Pakistan and 0 to 97% in China. On average 9% shares in Pakistani firms and 8.5% firms in China are owned by institutional owners.

Moreover, some variables show a significant variation between minimum and maximum values. For instance, value of institutional ownership spread from 0% to 98%, and size from 1.495 to 10.763 suggesting that the difference between the sample companies is large in these variables.

TABLE 4.4: Descriptive Statistics of CSR Disclosure Determinants (China)

Variable	Mean	Std. Dev.	Min.	Max.	Obs.
SIZE	20.39	1.780	15.76	25.256	3564
PROF	0.136	0.077	0.020	1.070	3564
INDEBT	0.329	0.097	0.000	0.645	3564
BIND	0.149	0.357	0.000	1.000	3564
BSIZE	9.104	1.104	7.000	16.00	3564
MD	1.042	0.396	0.477	1.996	3564
PC	0.027	0.162	0.000	1.000	3564
IO	8.51	21.524	0.000	97.00	3564
FAM	0.214	0.215	0.000	0.800	3564

Variables are size of firm (SIZE), firms profitability (PROF), level of firms debt holdings (INDEBT), board independence (BIND), size of corporate board (BSIZE), other simultaneous directorships held by the board members (MD), political connectedness of the board (PC), ownership held by different institutions (IO) and ownership by the family members (FAM).

Table A-1 and Table A-2 show the average disclosure quantity and quality scores by industry. The industrial classification is adopted from CSRC for Chinese firms and PSX for Pakistani firms.

For China, in 13 industries, the Electric power, gas and water production and supply and Mining are amongst the industries with high disclosure scores. Similarly, in Pakistan the highest scorers are Cement and Fertilizer industries. This is consistent with the CSR literature which shows that firms belonging to high pollution industries e.g., extractive industries, have certain rules and regulations regarding environmental protection from their governments that they have to abide by. Moreover, the companies from environmentally sensitive industries are tagged as

harmful for the environment and hence have to confront more pressure as compare to their counterparts. As a result, they have to report more on their environmental information and health and safety measures taken for their employees because otherwise stakeholders might tag it as bad CSR performance. Whereas, Information technology and Miscellaneous are the industries that score lowest with regards CSR disclosure quantity and quality in China and Textile spinning is the lowest scoring industry in Pakistan.

4.4 Correlation Analysis

The CSR disclosure of a firm depends upon its policy, goals and strategies in this regard. Hence it is argued that firm’s characteristics can better predict its CSR disclosure behavior.

TABLE 4.5: Correlation Analysis of CSR Disclosure Determinants (Pakistan)

	DQt	DQI	SIZE	PROF	INDEBT	BIND
DQt	1					
DQI	0.628***	1				
SIZE	0.490***	0.460***	1			
PROF	0.302***	0.289***	0.169***	1		
INDEBT	-0.192***	-0.188***	0.025	-0.241***	1	
BIND	0.200***	0.201***	0.143***	0.028	-0.052**	1
BFSIZE	0.391***	0.376***	0.362***	0.095***	-0.059**	0.062***
MD	-0.036	-0.073***	-0.099***	-0.023	-0.062***	-0.027
PC	0.163***	0.126***	-0.113***	-0.036	0.034	-0.012
IO	-0.267***	-0.290***	-0.238***	-0.178***	0.118***	-0.0321
FAM	-0.327***	-0.303***	-0.279***	-0.114***	0.155***	-0.141***
	BFSIZE	MD	PC	IO	FAM	
BFSIZE	1					
MD	-0.055**	1				
PC	-0.056**	0.008	1			
IO	-0.143***	-0.014	0.154***	1		
FAM	-0.231***	-0.013	0.112***	0.269***	1	

***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Variables are CSR disclosure quantity of firm (DQt), quality of firms CSR disclosure (DQI), size of firm (SIZE), firms profitability (PROF), level of firms debt holdings (INDEBT), board independence (BIND), size of corporate board (BFSIZE), other simultaneous directorships held by the board members (MD), political connectedness of the board (PC), ownership held by different institutions (IO) and ownership by the family members (FAM).

Firms differ from each other in objectives, targets, ownership and management style but share the same country setting with same laws, rules and regulations. This sub-section deals with employing statistical methods like correlation analysis to detect the factors that are associated with CSR disclosure quantity and quality in China and Pakistan.

The quantity and quality of CSR disclosure depends upon two elements, first one is the firm specific features and second one is the CG and ownership structure of a firm. The correlation tables i.e. (Table 4.7 and Table 4.8) show which factors positively or negatively correlates with the quantity and quality of disclosures.

The correlation statistics show that firm size is significantly and positively related to the quantity and quality of CSR disclosures. This implies that a firm larger in size is more likely to issue a comprehensive and good quality CSR report. Moreover, the statistics show that the relationship of firm size with CSR disclosure quantity is more strong then the quality of disclosure. Legitimacy theory argues that the visibility of a firm with the general public depends upon its size and this visibility consequently leads to public scrutiny (Aerts & Cormier, 2009). Dowling and Pfeffer (1975) argue that firms with more public visibility are expected to be more involved in legitimating behavior. Moreover, the correlation statistics reveals that profitability is significant and positively related to CSR disclosure quantity and quality. This result hints that increase in the profits of a firm leads to increase in its quantity and quality of CSR disclosures. Conversely, the correlation coefficient of indebtedness shows financial leverage has a negative and significant association with the quantity and quality of CSR disclosures. Moreover, it can be seen that indebtedness has higher correlation with quantity of disclosure then the quality. This result indicates that firms with more financial leverage tend to disclose less on their CSR engagements probably because of less engagement to begin with. As per agency theory, the firms with high leverage usually trade-off between two choices. First is engaging in social and environmental activities and reporting on such engagements with additional costs because social disclosures are costly. Second is prioritizing to repay the existing debt load over engaging in CSR activities. Therefore, the second option seems to be a rational choice for majority

companies because CSR reporting put an additional burden on leveraged firms. This kind of situation make the firms report on minimum required information to save the costs associated with such disclosures.

With regards governance structure, the correlation table shows that board independence has a positive and significant association with the quantity and quality of CSR disclosures. This result is consistent with Liao et al. (2015), where they found a positive association between the presence of independent directors on the board and CSR disclosure in firms of the U.K. Similarly, the correlation coefficient of board size demonstrates that board size has a positive and significant association with the quantity and quality of CSR disclosures in Pakistan but insignificant in China. The results imply that firms having larger boards report more on their CSR activities. The results also indicate that board size has a strong association with disclosure quantity as compare to quality. Moreover, the figures show that multiple directorships has no significant association with the quantity of disclosures in both countries but a significantly negative association with the quality of CSR disclosures in Pakistan. This result is consistent with (Mallin & Michelon, 2011), where they reported a negative relation between the number of directorships held by the board members with the involvement of firms in social and environmental activities. Politically connected board is a more prevalent phenomenon in emerging economies (Du, Zeng, & Du, 2014). In the table above, the correlation statistics exhibit the strength of association between politically connected boards and CSR disclosures. It is found that political connection has a significantly positive relation with the quantity and quality of disclosures. Moreover, the strength of relation is stronger with quantity of CSR disclosures as compare to quality. These results support the findings of FernandezGago, CabezaGarca, and Nieto (2018) who found that political background of directors is positively associated with the probability of firm reporting on its CSR performance in Spain.

With regards ownership variables, the correlation coefficient of institutional ownership shows that it has a negative and significant association with the quantity and quality of CSR disclosures. Moreover, it can be seen that institutional ownership has almost equal correlation with quantity and quality of disclosure. Finally, the

TABLE 4.6: Correlation Analysis of CSR Disclosure Determinants (China)

	DQt	DQI	SIZE	PROF	INDEBT	BIND
DQt	1					
DQI	0.784***	1				
SIZE	0.208***	0.229***	1			
PROF	0.121***	0.123***	0.112***	1		
INDEBT	-0.112***	-0.127***	0.0495***	-0.074***	1	
BIND	0.112***	0.133***	0.132***	0.004	-0.006	1
BSIZE	0.013	0.014	0.074***	0.014	-0.033**	-0.033**
MD	0.013	0.009	-0.029**	-0.012	-0.001	-0.015
PC	0.042***	-0.073***	0.099***	-0.004	-0.012	0.055***
IO	-0.056***	-0.263***	0.006	-0.029*	-0.002	-0.002
FAM	-0.281***	0.126***	-0.181***	-0.088***	0.182***	-0.183***
BSIZE	1					
MD	-0.028*	1				
PC	0.155***	-0.018	1			
IO	-0.052***	0.022	-0.058***	1		
FAM	-0.023	0.005	-0.049***	0.025	1	

***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Variables are CSR disclosure quantity of firm (DQt), quality of firm's CSR disclosure (DQI), size of firm (SIZE), firms profitability (PROF), level of firms debt holdings (INDEBT), board independence (BIND), size of corporate board (BSIZE), other simultaneous directorships held by the board members (MD), political connectedness of the board (PC), ownership held by different institutions (IO) and ownership by the family members (FAM).

correlation result demonstrates the strength of association between family involvement and CSR disclosures. It is found that family involvement has a significantly negative relation with the quantity and quality of disclosures. This shows that family has a substantial influence on the decision of CSR reporting. The results also show that family involvement is more strongly correlated with CSR disclosure quantity as compare to quality.

4.5 Regression Assumptions

As explained in methodology section, the basic assumptions of multiple linear regression which include multicollinearity, heteroscedasticity, normality, stationarity/linearity, autocorrelation and endogeneity, must be satisfied before performing the analysis otherwise the estimates would be biased and hence unreliable. Therefore, this section employs various statistical tests to check the assumptions of multiple linear regression.

4.5.1 Multicollinearity

Multicollinearity happens when two or more independent variables are highly correlated with each other. This co-movement of independent variables can reduce the precision of the regression results (Mahadeo et al., 2011). Multicollinearity is a problem and it should be addressed before running the regression on data. Literature suggests a variety of statistical procedures to detect the problem of multicollinearity for instance Spearman's non-parametric correlation coefficient, Variance Inflation Factor (VIF) and Tolerance statistics (TOL).

Variance Inflation Factor (VIF) and Tolerance statistics (TOL) have been used in this study to detect whether the independent variables move in unison. According to (Kleinbaum, Kupper, & Muller, 1988), a VIF of greater than 10 and TOL near 0 is an indication that there exists a strong association between the independent variables. Table A-3 indicates that the independent variables do not suffer from the problem of multicollinearity. The highest VIF is 1.86 which is well below the critical threshold of 10, beyond which multicollinearity becomes a problem. Moreover, the minimum TOL statistic is 0.536 which also in a safe range, hence there is no violation of multicollinearity assumption in our data.

4.5.2 Heteroscedasticity

Ideally, the variance of errors should be consistent and this preferred condition is called homoscedasticity. On the other hand, heteroscedasticity means that the variance of errors is not consistent for different values of independent variables or has a different scatter. The presence of heteroscedasticity can raise a question on the validity of regression results and hence the findings are not considered reliable. So before heading towards regression analysis, to check the presence of possible heteroscedasticity Breusch- Pagan/ Cook- Weisberg Test is employed and the results for CSR disclosure quantity model and CSR disclosure quality model are reported in Table 4.10. The null hypothesis of Breusch- Pagan/ Cook- Weisberg Test is that "model has constant variance". The P-value of both CSR disclosure quantity and quality models is greater than 0.05, which shows that the

null hypothesis of constant variance cannot be rejected. Hence it can be concluded that the data is free of heteroskedasticity.

TABLE 4.7: Testing for Heteroscedsticity Using Breusch- Pagan/ Cook-Weisberg Test

	China	Pakistan	Ind. Variable
Chi square	2.06	0.35	CSRD quantity
Prob. > Chi square	0.151	0.556	
Chi square	1.82	0.09	CSRD quality
Prob. > Chi square	0.381	0.768	

4.5.3 Normality

If residuals follow a normal distribution it leads to reliable confidence intervals. The residuals are the difference between actual value of the dependent variable and its estimated value based on the model for each observation of the data. The difference of near to zero shows that the model is strong. The normality is checked by generating the graph of the residuals. After examining the graphs of CSR disclosure quantity models in Figure A 3 and Figure A 5 and CSR disclosure quality models in Figure A 4and Figure A 6, it can be concluded that the data is normal (bell shaped) and there is no violation of this assumption.

4.5.4 Stationarity/Linearity

Linearity means that the relationship between dependent and independent variable must be linear. If this relationship is non-linear then the obtained results are not accurate. Therefore Augmented Dickey-Fuller test for stationarity is used to test the null hypothesis that “unit root is present in the sample” for each variable. The results of Augmented Dickey-Fuller test for the models of CSR disclosure quantity and quality are presented in Table A-4. The results show that the series of all the determinants of CSR disclosure quantity and quality are linear as the null hypothesis of unit root is rejected. Therefore, it can be safely claimed that the data does not suffer from the problem of stationarity/linearity.

4.5.5 Autocorrelation

The error term at a specific level of observation should not predict the next value of error term in the series. For example, if an error term obtained at a specific level of observation is negative and that raises the chances of next error term in the series to be negative too, this is said to be a positive serial correlation. Presence of auto-correlation causes the standard errors to be biased and produce less precise coefficient estimates. Although auto-correlation is a problem with time series data, this study employs Durbin Watson test to detect the presence of serial correlation in the data. The results of Durbin Watson test for the determinants of CSR disclosure quantity are 1.83 and 1.78 for China and Pakistan respectively. Similarly, the values of Durbin Watson test for CSR disclosure quantity determinants are 1.88 and 1.90 for China and Pakistan respectively. The value of 1.7-2 in DW test is defined as a safe range of autocorrelation (Asteriou & Hall, 2015) so the test stats belong to the safe range and hence it can be safely claimed that the data is free from serial correlation.

4.5.6 Endogeneity

Statistical procedures are used to ascertain the robustness of our results. The results cannot be robust if they suffer from the issue of endogeneity or omitted variables bias. Endogeneity refers to the issue where a change in dependent variable causes a change in independent variable, where this change could be positive or negative. In such a case these two variables would say to be endogenous or reverse causing each other. In our case to check whether a change in our dependent variable CSR disclosure quantity and CSR disclosure quality affect the independent variables like board independence, profitability, indebtedness etc. the Granger causality Wald test is performed and the results are reported in Table A-5 and Table A-6.

The null hypothesis of this test is that “lagged values of independent variable do not explain the variation in dependent variable”. The p-value of more than 5% allows us to accept the null hypothesis of no causality and hence it can be safely

claimed that the dependent variables of CSR disclosure quantity and quality do not have a causal effect on any of the determinants.

Furthermore, the omitted variables bias is a major concern when it comes to statistical models. The presence of such bias is checked by employing Ramsey Regression Equation Specification Error Test (RESET). The results show that our functional form is correct and the model does not suffer from the issue of omitted variables.

4.6 Multiple Regression Analysis

The results of univariate analysis gives the idea about the strength of association between any variables but fails to specify how much variation in the dependent variable is caused by the independent variables. Furthermore, the univariate analysis overstates the explanatory power of independent variables (Patton & Zelenka, 1997). Hence, in order to find the determinants of CSR disclosure quantity and quality the following regression model is tested using multiple regression analysis.

$$DQt_{i,t}, DQl_{i,t} = \beta_0 + \beta_1 Size_{i,t} + \beta_2 Prof_{i,t} + \beta_3 Indebt_{i,t} + \beta_4 Bind_{i,t} + \beta_5 BSize_{i,t} + \beta_6 MD_{i,t} + \beta_7 PC_{i,t} + \beta_8 IO_{i,t} + \beta_9 Fam_{i,t} + IND\ dummies + TIME\ dummies + \varepsilon_{i,t} \quad (2)$$

Where DQt is the CSR disclosure quantity of a firm calculated from equation (1) and DQl is the quality of firm's CSR disclosure. Size is the size of firm, Prof is firm's profitability, Indebt. is the level of firm's debt holdings, Bind is board independence variable, BSize is the size of corporate board, MD is the other simultaneous directorships held by the board members, PC is the political connectedness of the board, IO is the ownership held by different institutions and Fam is ownership by the family members. Finally, industry (IND) and time (TIME) dummy variables are used to control for fixed effects. The regression equation consists of total eleven independent variables, among which eight are continuous and three are dichotomous.

This thesis employed multiple regression models to study the determinants of CSR disclosure quantity and quality. Multiple regression is the extended form of simple linear regression analysis. Multiple regression models are used to identify the relationship between more than one independent variable (continuous or categorical) and one continuous dependent variable (Karadas, Celik, Serpen, & Toksoy, 2015). Moreover, multiple regression model aids in detecting anomalies or outliers amongst the independent variables (Jeon, 2015). This research model also helps in determining the overall fit of the model and the individual contribution of each independent variable in explaining this variance. This study used multiple regression model because the data meets the preliminary conditions of the model, that is, one dependent variable (CSR) and multiple independent variables (nine determinants).

Table 4.8 and Table 4.9 report the regression results for determinants of CSR disclosure quantity and quality in Pakistan. The regression test is applied to the panel data of 9 years (2009-2017). Model 1 and Model 2 test the determinants of CSR disclosure quantity and quality respectively for Pakistan. The F- Stat is significant at 1% for both models of our selected determinants which shows that the null hypothesis that there is no relationship between the determinants and CSR disclosure quantity and quality is rejected. Moreover, the adjusted R-square of 0.38 and 0.40 indicate that 38% variation in CSR disclosure quantity is explained jointly by these determinants and 40% variation in CSR disclosure quality is explained the determinants included in Model 2.

Overall, the results advocate that firm size, profitability, indebtedness, board independence, board size, multiple directorships, political connection and family ownership significantly affect the quantity and quality of CSR disclosures. In contrast, institutional ownership has no statistical significance with CSR disclosure quantity and quality.

Table 4.9 and Table 4.10 report the multivariate regression results for determinants of CSR disclosure quantity and quality in China. The regression is run on the panel data of 9 years (2009-2017). Model 1 checks the determinants of CSR disclosure quantity, whereas Model 2 tests the determinants of CSR disclosure

TABLE 4.8: Regression Results for Determinants of CSR Disclosure Quantity (Pakistan)

Independent Variable	Regression Coefficient	Standard Error	T- statistic	Significance
<i>Firm specific features</i>				
SIZE	0.073	0.006	11.96	0
PROF	0.594	0.074	8	0
INDEBT	-0.193	0.057	-3.39	0.001
<i>Governance structure</i>				
BIND	0.175	0.056	3.11	0.002
BSIZE	0.044	0.005	8.02	0
MD	-0.042	0.014	-2.91	0.004
PC	0.083	0.026	3.19	0.001
<i>Ownership structure</i>				
IO	0	0	1.21	0.261
FAM	-0.075	0.028	-2.62	0.009
Intercept	-1.899	0.102	-18.46	0
IND	Included			
TIME	Included			
Obs.	1980			
Adj. R-square	0.385			
F- statistic	36.44			
Probability (F- stat)	0			

Note: Industry and Time effects are fixed by including dummy variables. Their results are not reported because each dummy is not significant.

Variables are size of firm (SIZE), firms profitability (PROF), level of firms debt holdings (INDEBT), board independence (BIND), size of corporate board (BSIZE), other simultaneous directorships held by the board members (MD), political connectedness of the board (PC), ownership held by different institutions (IO), ownership by the family members (FAM), industry dummies (IND) and time dummies (TIME).

quality. F-statistics for both models have 1% significance level which shows that the null hypothesis of no association between the determinants and CSR disclosure quantity and quality is rejected. Additionally, the adjusted R-square of 0.17 and 0.25 indicate that 17% and 25% variation in CSR disclosure quantity and quality respectively is explained jointly by these determinants.

The multivariate results for Chinese data show that firm size, profitability, indebtedness, board independence, institutional ownership and family ownership significantly affect the quantity and quality of CSR disclosures. In contrast, board

TABLE 4.9: Regression Results for Determinants of CSR Disclosure Quality (Pakistan)

Independent Variable	Regression Coefficient	Standard Error	T- statistic	Significance
<i>Firm specific features</i>				
SIZE	0.129	0.014	9.15	0
PROF	0.949	0.166	5.71	0
INDEBT	-0.346	0.125	-2.75	0.006
<i>Governance structure</i>				
BIND	0.404	0.125	3.22	0.001
BSIZE	0.096	0.012	7.6	0
MD	-0.076	0.031	-2.42	0.016
PC	0.34	0.057	5.94	0
<i>Ownership structure</i>				
IO	0	0	0.07	0.946
FAM	-0.213	0.066	-3.22	0.001
Intercept	-4.324	0.298	-14.54	0
IND	Included			
TIME	Included			
Obs.	1980			
Adj. R-square	0.403			
F- statistic	32.06			
Probability (F- stat)	0			

Note: Industry and Time effects are fixed by including dummy variables. Their results are not reported because each dummy is not significant.

Variables are size of firm (SIZE), firms profitability (PROF), level of firms debt holdings (INDEBT), board independence (BIND), size of corporate board (BSIZE), other simultaneous directorships held by the board members (MD), political connectedness of the board (PC), ownership held by different institutions (IO), ownership by the family members (FAM), industry dummies (IND) and time dummies (TIME).

size, multiple directorships and political connections have no statistical significance with CSR disclosure quantity and quality.

Furthermore, industry dummies have been added in the multivariate regression test to control for the impact of industrial affiliation on CSR disclosure of firms. CSR literature has identified industry type as a significant determinant of CSR disclosure quantity and quality. This claim is backed by legitimacy theory which contends that industrial affiliation determines the amount of attention and pressures a firm receives from the society, hence in response they disclose more to legitimize their existence and activities Deegan and Gordon (1996). This view

TABLE 4.10: Regression Results for Determinants of CSR Disclosure Quantity (China)

Independent Variable	Regression Coefficient	Standard Error	T- statistic	Significance
<i>Firm specific features</i>				
SIZE	0.029	0.003	9.97	0
PROF	0.294	0.058	4.99	0
INDEBT	-0.164	0.05	-3.28	0.001
<i>Governance structure</i>				
BIND	0.06	0.013	4.57	0
BSIZE	-0.003	0.004	-0.8	0.423
MD	0.014	0.011	1.22	0.223
PC	0.006	0.028	0.24	0.811
<i>Ownership structure</i>				
IO	-0.001	0	-3.66	0
FAM	-0.275	0.022	-12.11	0
Intercept	-0.761	0.073	-10.4	0
IND	Included			
TIME	Included			
Obs.	3564			
Adj. R-square	0.171			
F- statistic	24.45			
Probability (F- stat)	0			

Note: Industry and Time effects are fixed by including dummy variables. Their results are not reported because each dummy is not significant.

Variables are size of firm (SIZE), firms profitability (PROF), level of firms debt holdings (INDEBT), board independence (BIND), size of corporate board (BSIZE), other simultaneous directorships held by the board members (MD), political connectedness of the board (PC), ownership held by different institutions (IO), ownership by the family members (FAM), industry dummies (IND) and time dummies (TIME).

is also consistent with other studies, Segu-Mas, Polo-Garrido, and Bolas-Araya (2018), in a study of 300 firms belonging to eight industrial sectors from 28 countries, investigated the determinants of CSR reporting. They found that industry belonging significantly impacts the CSR disclosure quantity and quality as well. Reverte (2016) also identified that firms belonging to environmentally sensitive industries report more on their CSR activities as compare to firms from other industries. Similarly, as literature shows that CSR disclosure by firms varies across time due to variety of reasons like societal pressure, governmental regulations and increased customer awareness etc.(Gray et al., 1995), so in order to control for

TABLE 4.11: Regression Results for Determinants of CSR Disclosure Quality (China)

Independent Variable	Regression Coefficient	Standard Error	T- statistic	Significance
<i>Firm specific features</i>				
SIZE	0.026	0.003	7.93	0
PROF	0.197	0.062	3.16	0.002
INDEBT	-0.208	0.053	-3.91	0
<i>Governance structure</i>				
BIND	0.036	0.013	2.69	0.007
BSIZE	-0.001	0.004	-0.44	0.659
MD	0.017	0.011	1.55	0.121
PC	-0.029	0.028	-1.03	0.301
<i>Ownership structure</i>				
IO	-0.001	0	-3.43	0.001
FAM	-0.224	0.026	-8.72	0
Intercept	-0.731	0.096	-7.6	0
IND	Included			
TIME	Included			
Obs.	3564			
Adj. R-square	0.252			
F- statistic	28.94			
Probability (F-stat)	0			

Note: Industry and Time effects are fixed by including dummy variables. Their results are not reported because each dummy is not significant.

Variables are size of firm (SIZE), firms profitability (PROF), level of firms debt holdings (INDEBT), board independence (BIND), size of corporate board (BSIZE), other simultaneous directorships held by the board members (MD), political connectedness of the board (PC), ownership held by different institutions (IO), ownership by the family members (FAM), industry dummies (IND) and time dummies (TIME).

this effect the time dummies have been added in the model and the dummies were found to be significantly related to CSR disclosure. The detailed explanation regarding each determinant is presented below. The explanation covers whether the relationship was found significant or not. If yes what are its implications and what other studies support our results. If no then how and why are these results from the current literature and what potential implications it hold for academic as well as corporate community. The nine determinants of CSR disclosure for the markets of China and Pakistan are explained as.

4.6.1 Firm Size

The regression coefficients of China and Pakistan show that firm size has a significantly positive implication on the quantity and quality of CSR disclosures. Legitimacy theory highlights that communities force business managers to disclose more about their CSR performance. Financial profitability give firms the confidence to reveal their CSR engagements to stakeholders in order to gain legitimacy in the society. Moreover, with the growing size of companies and consequent increase in their resources, they generally develop CSR plans and aggressively participate in and report on their sustainability activities in a bid to satisfy the demands of various stakeholders (McWilliams & Siegel, 2001). Moreover, as a reasonable amount of time, expertise, financial and human resources are a pre-requisite for the process of compilation, analysis and disclosure of CSR activities. Hence, larger firms are found to be in a better position to afford such resources as compare to small firms in China and Pakistan. Exploring the relationship between firm size and CSR reporting, Herbohn, Walker, and Loo (2014) found in Australia that small corporations due to their competitive disadvantage with their peers tend to hide sensitive information which includes CSR disclosures. Our findings support the results of Badulescu, Badulescu, Saveanu, and Hatos (2018) who showed that large firms were significantly more involved in social and environmental activities including reporting. In this vein, Patten (1991) examined the source of motivation behind social reporting by companies. He identified profitability as one of the major reasons behind firms disclosing their social and environmental performance. In the same vein, a significantly positive impact of profitability on CSR reporting has been reported by (Mohamed, 2017). Reason being profitability provides management the opportunity to get engaged in CSR activities and programs and thus disclosure. Moreover, researchers argue that as profitable firms uses CSR disclosure as a medium to justify that they are generating their profits and operating within the norms of the society. Our results also confirm the claims of legitimacy theory, according to legitimacy theory the greater visibility of large firms makes them disclose more on their CSR participation in a bid to avoid pressure and criticism from socially sensitive interest groups (Mahadeo,

Oogarah-Hanuman, & Soobaroyen, 2011). Adams et al. (1998) find that highly visible firms issue high quality CSR reports in an attempt to satisfy the demands of social activists. Therefore, big firms are more likely to provide more CSR disclosures because they are more visible and hence more accountable with respect to social and environmental disclosures. This result is consistent with Godos-Dez, Cabeza-Garca, Alonso-Martnez, and Fernandez-Gago (2018) where they reported a positive relation between CSR disclosure and firm size. They argued that with the increment in the size of firms the attention focused on them by stakeholders also increases and as a result the firms are bound to satisfy the demands of all stakeholders. In the same vein Rahman et al. (2011) also found that bigger firms disclose more information regarding their CSR engagements than their smaller counterparts. Moreover, our findings contradict the research results of Alsoboa and El-shohnah (2015) who found solid evidence that firm size does not influence CSR disclosure in Jordanian banking firms. Similarly, the research results of Bhattacharyya (2016) and Madden, Fehle, and Fournier (2006) also contradict our findings, who found that smaller firms are more likely to report on their CSR engagements specifically philanthropic engagements than big firms. Furthermore, Firm size is noticeably one of the most significant variables in this study, as it is significant in almost all the regression models. This result is in line with the corporate finance literature that argues firm size as a most relevant variable.

H1a and **H1b** predicted that firm size positively impacts the quantity and quality of CSR disclosures. The hypothesis is supported as the regression coefficient is positive and statistically significant; hence it is concluded that firm size is one of the determinants of CSR disclosure quantity as well as quality in China and Pakistan.

4.6.2 Firm Profitability

The multivariate analysis results consistent with the univariate analysis show that good citizenship behavior of Pakistani and Chinese firms depends upon the resources available, so profitable firms which have the capacity to devote more funds to sustainability related activities including disclosure report more on their social

behavior. The firm profitability coefficient reported is positively significant at 1% level. This finding implies that firms with sufficient financial resources are likely to disclose more regarding their CSR activities than those firms with limited resources. Our findings support the results of Qiu, Shaukat, and Tharyan (2016), who found that past profitability increases the current CSR reporting level. As stakeholder theory contends that financial position of a firm dictates its choice to report on their sustainability activities or not. According to this theory, when financial performance of a company is not going well then the economic demands supersede CSR disclosures (Roberts, 1992). Exploring the association between financial profitability and CSR reporting, Giannarakis (2014) has produced somewhat similar results from a developing country Romania. Giannarakis (2014) argued that companies share information regarding their CSR involvement with other stakeholders in order to legitimize their existence. This positive association between firm profitability and sustainability reporting is inconsistent with Nawaiseh (2015) where it was found that firm's profitability does not significantly impact its environmental reporting level. It also contradicts the findings of Jyoti D Mahadeo, Vanisha Oogarah-Hanuman, and Teerooven Soobaroyen (2011) who found a negative association among firm profitability and CSR disclosure. A possible reason behind their results is the mandatory requirement of Mauritius with regards CSR disclosure on firms. Results of other studies also show the inconsistencies with regards the relationship between firm profitability and CSR disclosure (Sunarish and Nurhikmah, 2017; Krisna and Sudhardianto, 2016).

H2a and **H2b** predicted that firm profitability positively impacts the quantity and quality of CSR disclosures. The hypothesis is supported as the regression coefficient is positive and statistically significant; hence it is concluded that firm profitability is one of the determinants of CSR disclosure quantity as well as quality in China and Pakistan.

4.6.3 Indebtedness

The results of multivariate analysis show that firm indebtedness has a negative and significant impact on both the quantity and quality of CSR disclosures at

1% significance level. This significantly negative coefficient of INDEBT suggests that the payment of interest by highly leveraged firms impedes their spending on social activities because creditors exert pressure on their spending decisions (Brammer & Pavelin, 2008). In CSR literature the impact of firm's leverage on its quantity or quality of CSR reporting is highly controversial and researchers show inconsistent results in this regard. Giannarakis (2014) reported that firms with high debt level share less information with their stakeholders regarding their CSR performance because they can't afford reporting expenses due to huge burden of debt on them. In the same vein, Branco and Rodrigues (2008) concluded that extent of sustainability reporting of firms with high financial leverage in Portugal is low as compare to other firms because of CSR reporting is a costly procedure. Research claim that the firms with higher levels of leverage are more likely to report the current profitability higher than the future profitability because highly leveraged firms are more prone to breach the debt contracts. Hence, such firms reveal less about their social engagements in order to report the current profits higher or avoid debt-holder's attention. Few empirical studies found a negative and significant relationship between financial leverage and CSR disclosures (Salehi, Tarighi, & Rezanezhad, 2019; Wuttichindanon, 2017). Faisal et al. (2018) studied the listed firms of Indonesia and found a negative association between leverage and environmental disclosures. On the contrast, few researchers were unable to find any significant association between the level of indebtedness and sustainability disclosure of firms (Reverte, 2009; Siregar & Bachtiar, 2010; Wuttichindanon, 2017). Whereas, some studies have reported a positive relation, particularly Mutakin and Khan (2014) found that companies with high debt levels report more regarding their sustainability performance because firms have to legitimize their activities to all the stakeholders including creditors. Similarly, Chan, Watson, and Woodliff (2014) found a positive association between firm's leverage levels and CSR disclosure and associated it with creditor power. Their findings support the results of earlier studies from developed economies like US and Singapore (Roberts, 1992). Purushothaman, Tower, Hancock, and Taplin (2000) also predicted an inverse relationship between indebtedness and sustainability reporting because firms share their sustainability performance with their creditors through other channels

since they have close association with them. On the contrast, Naser, Al-Hussaini, Al-Kwari, and Nuseibeh (2006) found a positive relationship between financial leverage and CSR disclosures of Qatari firms.

H3a and **H3b** predicted that firm indebtedness is negatively related to the quantity and quality of CSR disclosures. The hypothesis is supported as the regression coefficient is negative and statistically significant; hence it can be concluded that firm indebtedness is one of the determinants of CSR disclosure quantity as well as quality in China and Pakistan.

4.6.4 Board Independence

The regression coefficient of board independence is positive and statistically significant at 1% level indicating that board independence and CSR reporting is positively related. This finding suggests that in China and Pakistan the companies with independent boards are more likely to issue detailed and quality CSR disclosures as compare to the firms which have less independent directors on the board. As per stakeholder-agency theory, an independent director of a firm is contractually affiliated with other stakeholders and also exercises a direct control over big decisions. With these facilities the independent directors can make sure that they safeguard the rights of all the stakeholders by taking steps like CSR reporting etc. (Aguilera, Williams, Conley and Rupp, 2006). Legitimacy theory adds that independent directors are more concerned for their reputation in the business circles and career, thus their inclusion in corporate board will result in more CSR disclosures (FernndezGago et al., 2018). This result support the findings of Liao et al. (2015) who found that independent boards are more effective when it comes to monitoring which will make them better in safeguarding the interests of all the stakeholders and direct the board to pursue more social and environmental activities. Similarly, other studies also found same relationships in Spanish listed firms (Garcia-Sanchez, 2014; PradoLorenzo et al., 2009). Similarly, Guerrero-Villegas, Prez-Calero, Hurtado-Gonzlez, and Girddez-Puig (2018) in their meta-analysis investigated the association of several variables with CSR disclosure including board independence. They indicated that board independence is the

most significant variable that is correlated with CSR disclosure. Whereas, Bansal, Lopez-Perez, and Rodriguez-Ariza (2018) employed a data set of 29 countries and found that firms with independent boards tend to report less on their CSR engagements. In the similar vein Said, Hj Zainuddin, and Haron (2009) showed that there is no significant association between presence of independent directors on the board and CSR reporting of Malaysian firms. However, many studies have reported a significantly positive relationship between board independence and CSR reporting (Cuadrado-Ballesteros, Rodriguez-Ariza, & Garcia-Sanchez, 2015). The resource based view maintains that the requirement of people intensive structures and cross functional coordination is better satisfied by independent directors as they possess professional expertise, competencies, external links and unique skills (Chen et al., 2016). This valuable capital help firms in resolving environmental uncertainties, acquiring vital resources and managing external dependencies, which results in enhanced sustainability performance (Ramn-Llorens et al., 2018). Ideally, independent board members play the monitoring role to settle the agency conflicts between executive directors and stakeholders. However, CCG require firms to include a specific proportion of independent members on the board. Such requirements make it compulsory for firms to include independent directors in the corporate board, this compulsion make companies hire directors who are independent by the letter but not the spirit of the law just to fulfill the regulatory requirement.

H4a and **H4b** predicted that board independence improves the quantity and quality of CSR disclosures. The hypothesis is supported as the regression coefficient is significantly positive; hence it is concluded that board independence is one of the determinants of CSR disclosure quantity as well as quality in China and Pakistan.

4.6.5 Board Size

The board size is found to be insignificant in explaining the change in quantity or quality of CSR disclosures in China. This finding is in line with the results of Said et al. (2009) who found that among different CG characteristics the board size fails to explain the changes in level of CSR disclosures in Malaysian firms. Cheng

and Courtenay (2006) reported the same results when studied the listed firms of Singapore. In the same vein Gordon, Fischer, Malone, and Tower (2002) found that board size is not a significant predictor of voluntary as well as mandatory disclosure because influential board members even if they are less in numbers can significantly alter the reporting expectations and this result in board size becoming an insignificant variable of CSR disclosures. These results do not support agency theory, which claims that the monitoring capabilities of board increases with the increase in board size, and this leads to increased CSR disclosures.

The multivariate analysis results show that in Pakistan the firms with big boards are more likely to report on their social and environmental activities as compare to their counterparts. The regression coefficient is positive and significant at 1% level. This finding shows that Pakistani firms with big corporate boards are likely to disclose more regarding their CSR activities than those firms with small boards. According to stakeholder theory, a large board means that more stakeholders are looking forward for firms' CSR disclosures so as a consequence company in order to satisfy the demands of these stakeholders would disclose more. This link is supported by agency theory as well. According to agency theory, the monitoring competences of corporate board grow with more number of board members, which leads to increased CSR disclosures (Guerrero-Villegas et al., 2018). This result is consistent with many previous studies which found a significantly positive relation between board size and CSR disclosures. Rehman, Ikram, and Malik (2017) found that firms with big corporate boards report more regarding their CSR involvement because they tend to consider the demands of all the stakeholders and not just shareholders. In the same vein, Harjoto, Laksmana, and Lee (2015) found that big corporate boards make the firm's perspective more broad and provide comparatively more cognitive resources to engage and report on CSR activities. CSR literature shows that big corporate boards positively impact the CSR engagement of firms in areas like improved work conditions or environmental performance (Post, Rahman, & Rubow, 2011). Our results justify why the CCG in some countries do not identify the ideal board size and instead only state that the board size should be appropriate. As board size represents heterogeneity between board members on skills and expertise, so big board means more variety that leads

to more resources which would enable the firms to satisfy the needs of multiple stakeholders by reporting on their CSR activities (Rao & Tilt, 2016). This result is consistent with findings of Htay, Rashid, Adnan, and Meera (2012) who found a positive relationship between board size and CSR disclosure. Kaymak and Bektas (2017) reported a significantly positive association between board size and CSR reporting in their study of Multinational firms. They explained that larger board size brings in more diverse group who are representatives of various stakeholders, hence firms with larger boards report more on their social and environmental activities to satisfy the needs of multiple stakeholders. Our results contradict the findings of Cheng and Courtenay (2006) and Giannarakis (2014) who reported that board size does not explain any variation in voluntary disclosure because of reduced monitoring capability of boards as the size increases.

H5a and **H5b** predicted that board size is positively related to the quantity and quality of CSR disclosures. The hypothesis is supported in the case of Pakistani market as the regression coefficient is significantly positive; hence it is concluded that board size is one of the determinants of CSR disclosure quantity as well as quality in Pakistan. On the other hand no significant relationship was found between board size and CSR disclosure quantity or quality in China; hence it is concluded that board size does not determine the CSR disclosure quantity as well as quality in China. Therefore, there is insufficient evidence to support **H5a** and **H5b** in case of Chinese firms.

4.6.6 Multiple Directorships

The regression coefficient of multiple directorships is positive but statistically insignificant at 5% level indicating that multiple directorships held by board members and CSR reporting is not related in Chinese market. This finding suggests that in China the companies with directors who hold simultaneous directorships in many other firms do not impact the quantity and quality of CSR disclosures. Our findings negate legitimacy theory, Resource based view, stakeholder theory and agency theory. All the mentioned theories contend that directors with simultaneous directorships disclose more regarding their CSR activities than their

counterparts. Our results contradict the findings of existing research showing significantly positive or negative association between multiple directorships and CSR disclosures. For example, according to Hashim and Rahman (2011), the firms whose directors sit on multiple boards disclose more about their CSR performance because such directors have greater access to information in multiple companies. This argument is also supported by Elsakit and Worthington (2014) who argued that directors mimic the sustainability related activities of firms on whose boards they sit simultaneously. Rao and Tilt (2016) based their argument on resource dependence theory, and found a positive association between multiple directorships held by a firm's board and its level of CSR disclosure. Our results are consistent with Barka and Dardour (2015) who found no significant association between multiple directorships and CSR disclosure and concluded that the relationship might not be linear in nature.

On the contrary, the results from Pakistani market are consistent with a small group of studies which show that multiple directorships and CSR reporting have inverse relationship because the directors get over occupied if they have multiple assignments and hence end up ignoring the needs of different stakeholders. In this regard, Cooper and Uzun (2012) argued that busy boards are a poor choice for firms that are socially and environmentally responsible because of lack of time and motivation in such directors. Their argument is also supported by Yeh and Hsieh (2017), who found a negative relationship between board busyness and CSR disclosures from Taiwanese firms. Jiraporn, Singh, and Lee (2009) reported a negative relation between multiple directorships held by board members and CSR disclosure by companies. Ideally, holding chairs on multiple boards enable directors to bring in more relevant expertise and experience, which tend to promote sustainability reporting because it is useful for all the stakeholders (Haniffa & Cooke, 2005). However, multiple directorships can make the directors ineffective for firms in different ways including sustainability performance and reporting because they are too busy or overstretched to discharge their duties (Fich & Shivdasani, 2012). This is the reason for restricting directors on the number of multiple directorships he/she can hold in publicly listed firms in majority countries. For instance in

Pakistan the board members of publicly listed firms were restricted to hold simultaneous directorships in maximum seven firms and this number has been reduced to five in 2017 CCG. Similarly, the CSRC limits the directors to not hold more than five simultaneous positions in boards of different companies.

H6a and **H6b** predicted that multiple directorships positively impact the quantity and quality of CSR disclosures. For Chinese market the hypothesis is rejected as the regression coefficient is statistically insignificant; hence it can be concluded that multiple directorships does not determine the quantity as well as quality of CSR disclosures in China. On the contrary multiple directorships significantly explain that variation in the quantity as well as quality of CSR disclosures in Pakistan but the relationship is inverse so the hypothesis is rejected for both the countries.

4.6.7 Political Connection

The results of multivariate analysis affirm that politically connected firm favors the probability that the company will issue a high quantity and quality CSR disclosures; this result is significant at 1% significance level. This finding shows that companies in Pakistan, which are politically connected, tend to disclose more regarding their CSR performance as compare to those with less political connections. Our findings are in line with the legitimacy theory and support the findings of Marquis and Qian (2014) who found that government link plays a significant role in enacting substantive sustainability actions including disclosure in scenarios where the firms are more likely to be under monitoring of government institutions. The significant amount of literature reports that government influences the future of any company in multiple ways. Siegel (2007) contend that political connectedness is an important strategic asset and if a firm utilizes it correctly that it can benefit the firm by improving its performance and value. Esa and Ghazali (2012) also show that firms improve their CSR performance as well as disclosure in reciprocity of favors gained due to political connections like preference in assignment of government contracts, easy regulations and easy taxation treatment. Our findings also support the stakeholder theory which contends that companies with political

connections are more strictly scrutinized for their sustainability practices. Hence, to avoid the risk that comes with socially irresponsible behavior the companies report on their sustainability related activities. Literature shows that political ties of board members increases the probability that firms will engage in sustainability or philanthropic activities. Similar findings are also provided by Marquis and Qian (2014), they found that that companies whose CEOs were a part of political assemblies tend to disclose more on their sustainability activities. Our results do not support the findings of Rahman and Ismail (2016), who reported that political connectedness does not explain the variation in CSR disclosures of Malaysian firms. Moreover, our results contradicts the findings of Muttakin, Mihret, and Khan (2018), who found that political affiliation of corporate boards leads to reduced CSR reporting in publicly listed firms of Dhaka Stock Exchange. In the case of Chinese market unlike other studies our findings did not support the notion that political links of board members would be related to sustainability disclosure of companies. This insignificant impact of political connection on CSR disclosure of firms contradicts the legitimacy theory which suggests that politically connected firms are more socially responsible because of government pressure. The findings are similar to some studies that were unable to find any significant impact of politically connected board on sustainability reporting in Malaysian firms (Rahman & Ismail, 2016; Erdayosi & Putri, 2019). On the other hand our findings contradict the research of Muttakin et al. (2018) who found that political connectedness tend to reduce the sustainability reporting of firms.

H7a and **H7b** predicted that political connectedness positively impacts the quantity and quality of CSR disclosures. The hypothesis is accepted in the case of Pakistani market as the regression coefficient is positive and statistically significant; hence it is concluded that political connectedness determine the quantity as well as quality of CSR disclosures in Pakistan. The hypothesis is rejected in the case of Chinese market as the regression coefficient is statistically insignificant; hence it is inferred that political connectedness does not impact the quantity or quality of CSR disclosures in China.

4.6.8 Institutional Ownership

The results of multivariate analysis show that in China the institutional ownership has a negative and significant impact on quantity and quality of CSR disclosures at 1% significance. This result differs from the results of univariate analysis because univariate analysis checks the direct association between two variables whereas; multivariate analysis includes other variables in the equation too. This finding shows that companies in China, which are dominantly owned by financial institutions, tend to disclose CSR reports that are not much extensive and low in quality as compare to those with less or no institutional ownership. In CSR literature studies report conflicting results regarding the relationship between institutional ownership and CSR disclosure. One strand of research argues that institutional ownership positively impacts the CSR reporting of firms. This group bases its argument on agency theory and contends that high level institutional ownership increases management's capability to align its policies with the interests of all stakeholders which includes CSR reporting (Kock, Santal, & Diestre, 2012). The other group contends that high level of institutional holdings increases conflict of interests, due to their distinct motivations towards stakeholders, between the owners which leads to poor monitoring by them (Dalton et al. 2003). Hence, the clashes created due to a large percentage of institutional owners may divert their attention from participating and reporting on their sustainability performance (Arora & Dharwadkar, 2011). As per agency theory, institutional investors show tunneling behavior instead of fulfilling the monitoring duties (Johnson, La Porta, Lopez-de-Silanes, & Shleifer, 2000). Therefore, these directors tend to pay less attention to sustainability involvement and disclosure. This result is similar to the conclusions of Mohammad and Mishiel (2019), they reported a significantly negative relationship of presence of institutional owners and CSR disclosure in Jordanian firms. This shows that institutional owners have a say on the matters of non-financial disclosures, and they discourage the decision makers to engage and report comprehensively on their social and environmental performance. The prior literature on the relationship between institutional ownership and CSR disclosure has mostly focused the developed markets (Mahoney & Roberts, 2007); hence this

result from developing economy will contribute in CSR literature.

On the contrary the multivariate analysis show that in Pakistani firms the institutional ownership does not explain the variation in quantity and quality of CSR disclosures. These findings challenges the theories like legitimacy, stakeholder and agency, where all these theories claim that firms report on their sustainability activities in order to satisfy the demands of various powerful stakeholders including institutional stakeholders and in return win their favor (Alshbili, Elamer, & Beddewela, 2018). The results are in line with Naser et al. (2006) who found that among different factors the institutional ownership fails to explain any variation in CSR reporting of Qatari listed firms. Similar are the findings of Habbash (2017) who found that there is no significant relation between presence of institutional owners and sustainability reporting by Saudi firms.

The findings support the institutional theory where the impact of institutional ownership is significant in explaining variation in CSR disclosures of Chinese firms whereas no significant influence was observed in Pakistani market. Hence the results show that the significance of this relationship is sensitive to the institutional context under consideration.

H8a and **H8b** predicted that institutional ownership positively impacts the quantity and quality of CSR disclosures. The hypothesis is rejected for both countries. In Chinese market as the regression coefficient is significantly negative; hence it is concluded that institutional ownership does not positively impact the quantity as well as quality of CSR disclosures in China. Whereas, the hypothesis is rejected for Pakistan because the regression coefficient is statistically insignificant; hence it is concluded that institutional ownership does not determine the quantity as well as quality of CSR disclosures in Pakistan. These results advocate that most institutional owners in Pakistan do not consider sustainability performance of firms while making their investment choices.

4.6.9 Family Ownership

The results of multivariate analysis show that family involvement has a negative and significant impact on both the quantity and quality of CSR disclosures at

1% significance level. This finding shows that companies in Pakistan, which are dominantly owned by family members tend to disclose less regarding their CSR performance as compared to those with less or no family involvement. Family firms are considered to be more concerned for non-financial matters including CSR involvement and reporting and many researchers have reported a direct and statistically significant link with sustainability disclosures (Blodgett et al., 2011; Labelle, Hefsi, Francoeur, & Ben Amar, 2018; Nekhili et al., 2017; Bansal et al., 2018).

However, from the agency theory perspective in family owned firms the principal-principal conflict is raised, which increases the influencing ability of family members over calling the shots and protect their own benefits while making decisions in the firm (Shleifer & Vishny, 1986). Research shows that family owners consider CSR investments as value destroying (Cespa & Cestone, 2007) so they resist CSR investments and disclosures because in their opinion it will not bring them personal benefits. Similarly, this finding supports the prediction that family owners control the entrenched management by stopping them from investing in CSR activities to please the non-financial stakeholders (Chrisman & Patel, 2012). Moreover, this negative relationship between family ownership and CSR disclosure is consistent with the expectation that as family owners are keenly involved in day to day operations of businesses which leads them to assessing more information as compared to their non-family counterparts.

As a consequence, there is more information symmetry so control mechanism for instance CSR reporting is not considered essential (Ho and Wong, 2001). This finding of negative relation between family ownership and CSR disclosure is not consistent with CSR literature where majority studies claim a positive association between these two variables (Blodgett et al., 2011; Cruz et al., 2014; Miller & Le Breton-Miller, 2006). For instance Shahzad et al. (2018) report that family firms are more socially responsible than their non-family counterparts in their study of 190 firms listed on PSX. A possible reason behind this difference is that the structure of ownership and the nature of agency problem in China and Pakistan are very different from the western world, which is intensified by the weak market

control mechanism, low investor protection. In emerging economies, the controlling shareholders have the option to exceed their control right by pyramidal ownership structure and cross-holdings among firms (Faccio & Lang, 2002). Such conditions facilitate the family owners to expropriate the rights of other stakeholders.

H9a and **H9b** predicted that family ownership negatively impacts the quantity and quality of CSR disclosures. The hypothesis is supported as the regression coefficient is negative and statistically significant; hence it is concluded that family ownership is one of the determinants of CSR disclosure quantity as well as quality in China and Pakistan.

4.7 Summary of the Chapter

Chapter 4 presented the results regarding the determinants of CSR disclosure quantity and quality for China and Pakistan over the period of nine years. The results revealed that over the years the quantity and quality of disclosures are improving in both countries. This increasing trend is associated with the intervention of related regulatory institutions in both countries. The analysis also shows which industry is disclosing more with regards its sustainability performance. The Electric power, gas and water production & supply and Mining industries from China and Cement and Fertilizer industries from Pakistan are the highest scorers among other industries. Moreover, 9 hypotheses were tested and the results are summarized in the Table 4.13.

TABLE 4.12: Results summary of hypothesis testing for Model 1

Independent variable	Hypothesis	Chinese Result	Pakistani Result
<i>Firm-specific features</i>			
Firm size	Positive relationship.	Positive relationship	Positive relationship
Firm profitability	Positive relationship.	Positive relationship	Positive relationship
Firm indebtedness	Negative relationship.	Negative relationship	Negative relationship
<i>Governance structure</i>			
Board independence	Positive relationship.	Positive relationship	Positive relationship
Board size	Positive relationship.	No relationship	Positive relationship
Multiple directorships	Positive relationship.	No relationship	Negative relationship
Political connection	Positive relationship.	No relationship	Positive relationship
<i>Ownership structure</i>			
Institutional ownership	Positive relationship.	Negative relationship	No relationship
Family ownership	Negative relationship.	Negative relationship	Negative relationship

Chapter 5

Impact of CSR Disclosure on Investment Efficiency

5.1 Introduction

The second main objective of this study is to analyze the link between CSR disclosure and investment efficiency of listed firms of China and Pakistan from 2009-2017. This chapter elaborates that the good quality sustainability disclosure is more informative in weak institutional settings and hence increases information symmetry which ultimately leads to increases investment efficiency. On the other hand poor quality CSR reporting is weak in disseminating information resulting in no change in information asymmetry and hence negatively affecting investment efficiency.

This chapter investigates the relationship between CSR disclosure and investment efficiency of firms in detail and is structured as follows. In section two the chapter builds the argument how CSR disclosure and investment efficiency are related. Section three presents the descriptive statistics of dependent and independent variables. This section is followed by the univariate analysis of CSR disclosure and investment efficiency along with the control variables for both countries. The next section presents the results of hypothesis testing using logistic regression analysis. Finally section six concludes the chapter.

5.2 Relationship Between CSR Disclosure and Investment Efficiency of Firms

The rise of corporate scandals in developing economies in the shape of exploitation of workers (Ashraf, 2018) and child labor (Delaney, Burchielli, & Tate, 2017) are the reasons behind CSR coming to the limelight. Additionally, these types of scandals have forced the corporations to take care of not just shareholders but all the stakeholders. Stakeholders now keep an eye on every activity of corporations, whether it is the quality of its product or it is social involvement of firms. Furthermore, now stakeholders which includes international investors, customers and regulatory organizations, expect companies to disclose their sustainability performance, in order to timely detect any unethical action from corporations (Momin & Parker, 2013). The recently evolved CSR forums in Pakistan like CSR Pakistan, NGOs (Non-Governmental Organizations) like WWF (World Wide Fund) and CSR standards like OHSAS (Occupational Health and Safety Assessment Series), ISO 14000 etc., and various regulation in China are encouraging companies to include CSR disclosure in their business policies (Ali & Frynas, 2018). In Sustainability reporting, companies provide information regarding their strategies, objectives and actions directed towards customers care, community welfare, environmental protection and human resource welfare (Gray et. Al., 1995).on the one hand, CSR reporting require expenses and time and on the other hand managers are mostly not confident whether the reporting would benefit them in any way. According to Chowdhury, Kumar, & Shome, 2016, in a scenario where the reporting fulfills the informational requirement of different stakeholders and aid them in any way to make investment choices then this will reduce information asymmetry in the market and would positively influence the firms financial performance. Studies demonstrate CSR disclosures have a tendency to positively impact the investment efficiency of companies through, enhancing control systems of firms, diminishing the odds of adverse selection. This in return stops firm management from wasting shareholders money. In the same vein, Beretta and Bozzolan (2008) studied the qualitative and quantitative aspects of corporate reporting. They along with other researchers concluded that reporting level is not a right proxy for reporting

quality. In light of these findings, it is suggested by Michelon et al. (2015) to investigate the corporate sustainability reporting they are mostly partial and less credible. In response to their suggestion, this study analyses the relationship between CSR reporting quality and corporate investment choices, which are greatly impacted through information asymmetry and agency conflicts. The majority literature disregard the distinction between quantity and quality of disclosure. As per disclosure theory, the quality of company reporting increasingly impact the value of information (Li, 2010; Miller & Skinner, 2015). moreover, Hasseldine, Salama, and Toms (2005) reported that the environmental disclosures quality has more influence on companys financial and non-financial performance in comparison to quantity. This shows that the quality feature of firm reporting is an important information resource about corporations for their stakeholders. With high quality CSR disclosures the company becomes in the spotlight of press and stakeholders, this increases the chance of being spotted and condemned against any malpractice by the management. Therefore, it can be claimed that sustainability reporting increases the information symmetry in the market and constrain the firms to get involved in any immoral actions. Contemporary literature has analysed the relationship between investment efficiency and CSR involvement (Benlemlih & Bitar, 2018) and investment efficiency and CSR disclosures (Zhong, 2017), but impact of CSR disclosure quality on investment efficiency has not been studied

The markets of China and Pakistan are studied in this thesis because sustainability reporting literature has mainly emphasized on the developed markets, whereas, it would be more insightful to study an institutional setting of developing markets where it is difficult to abate investment inefficiency. In China and Pakistan, the regulatory bodies require listed companies to disclose their sustainability performance but the companies have no binding on the level or standard of these reports. There are two perspectives namely opportunistic and information asymmetry regarding the aims and outcomes of corporations behind sustainability reporting. Opportunistic perspective argues that firms wrongly report on their sustainability activities to misguide the opinions of various stakeholders. Whereas information asymmetry view says that firms report on their sustainability involvement and use it as a tool to reduce information asymmetry in the market and hence the

cost of capital. Fortunately developed markets have strong investor protection mechanism in place whereas weak institutional settings like Pakistan lack in this. Therefore the results of this thesis would be helpful for corporate sector in identifying and implementing sustainability reporting policies in order to raise the firm performance.

Studying data from China and Pakistan, the results demonstrate that it is just high quality reporting by firms that positively impacts investment efficiency. The data was gathered from annual reports of firms, PSX and SBP for Pakistani firms and CSMAR and RKS datasets are employed to gather data for Chinese firms. Furthermore, binary logistic regression is used to study the impact of CSR disclosure quantity and quality on investment efficiency of firms. This chapter focuses on the relationship between CSR disclosure and investment efficiency, does the relationship varies with the type and quality of disclosures.

5.3 Descriptive Statistics

This section presents the descriptive statistics of dependent, independent and control variables. The mean, standard deviation, minimum value, maximum value, skewness, kurtosis, Jarque-Bera statistics for the variables are reported in Table 5.1 and Table 5.2 for China and Pakistan respectively. To control for the effect of outliers all continuous variables are winsorized at 1% and 99% of the distribution. Regarding the Investment Efficiency Dummy (IED) on average 42% Chinese companies and 40% Pakistani companies in the sample show investment efficiency. The DQ_t score averaged around 0.60 for China and 0.56 for Pakistan. Moreover, the mean score for DQ_l shows that the disclosure quality averaged about 0.42 for China and 0.15 for Pakistan. The small average of DQ_l for Pakistan indicates that as a whole very small number of firms have released high quality CSR reports. Furthermore, descriptive statistics imply that these firms donot differ much when it comes to assessing the quality of CSR reporting.

The table shows the mean values of sub-categories of CSR which respectively are: Community is 0.89 (China) & 0.21 (Pak); ENV is 0.79 (China) & 0.07 (Pak);

TABLE 5.1: Descriptive Analysis of CSR Disclosure and Investment Efficiency Relation (China)

Variable	Mean	S.D	Min.	Max.	Sk.	K.	J-B	Obs.
IED	0.421	0.493	0	1	0.097	1.009	518.511***	3564
DQt	0.607	0.283	0	1	-1.463	3.973	1233.565***	3564
DQl	0.425	0.216	0	1	-1.37	3.93	1086.457***	3564
HDQ	0.269	0.443	0	1	0.96	1.923	720.401***	3564
LDQ	0.269	0.443	0	1	0.96	1.923	720.401***	3564
SLK	1.701	1.719	0.083	9.651	3.73	19.871	44110.75***	3564
SIZE	20.39	1.78	15.76	25.256	-1.918	13.856	17185.71***	3564
INDEBT	0.327	0.097	0	0.645	0.17	3.537	52.637***	3564
SV	0.82	0.35	0.4	3.015	2.955	15.203	23833.79***	3564
FD	1.873	1.934	0.001	7.69	2.667	10.261	10534.40***	3564
COM	0.891	0.116	0	1	-3.241	18.08	399.91***	3564
ENV	0.797	0.231	0.1	1	-0.182	1.245	476.865***	3564
CUST	0.315	0.179	0.1	1	1.871	5.888	3317.533***	3564
HR	0.761	0.278	0.1	1	0.671	2.427	276.462	3564

S.D. = standard deviation, Sk. = skewness, K. = kurtosis, and J-B = Jarque-Bera test for normality. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Variables are investment efficiency (IED), CSR disclosure quantity score (DQt), CSR disclosure quality score (DQl), high quality disclosures (HDQ), low quality disclosures (LDQ), slack (SLK), size of firm (SIZE), level of firms debt holdings (INDEBT), sales volatility (SV), firms Financial distress (FD), CSR disclosures targeted towards community (COM), CSR disclosures targeted towards environment (ENV), CSR disclosures targeted towards customers (CUST), CSR disclosures targeted towards employees (HR).

Product & customer care is 0.31 (China) & 0.09 (Pak) and HR is 0.76 (China) & 0.11 (Pak). These indicate a high degree of similarity between all categories except Product & customer care in China and Community in Pakistan. Moreover the differences among each category are not very high as shown by the standard deviation.

Statistics show that Chinese firms focus on COM and ENV and Pakistani firms focus on COM and HR as a target for their CSR disclosure over the period of study. This focused emphasis on community welfare indicates that the corporate sectors of China and Pakistan are going through a nascent CSR stage where philanthropy is considered as a substitute for CSR. Various control variables are included in the research model to separate the result of CSR disclosure on investment efficiency effectively. As a proxy for Slack current ratio is used which is measured as current asset by current liabilities (SLK). Log of total assets is used as a proxy for firm size to standardize absolute values of total assets and to evade the non-normality of the distribution (SIZE). Firm's indebtedness is the debt to equity ratio (INDEBT) and

TABLE 5.2: Descriptive Analysis of CSR Disclosure and Investment Efficiency Relation (Pakistan)

Variable	Mean	S.D.	Min.	Max.	Sk.	K.	J-B	Obs.
IED	0.401	0.49	0	1	0.403	1.162	332.010***	1980
DQt	0.565	0.571	0	1	0.1	2.101	33.93***	1980
DQl	0.15	0.162	0	0.857	0.051	2.041	37.962***	1980
HDQ	0.271	0.444	0	1	1.363	2.869	615.188***	1980
LDQ	0.271	0.444	0	1	1.363	2.869	615.188***	1980
COM	0.219	0.202	0	1	1.196	3.785	523.327***	1980
ENV	0.071	0.133	0	1	2.735	11.016	7766.70***	1980
CUST	0.099	0.142	0	1	2.197	9.202	4765.06***	1980
HR	0.113	0.147	0	1	1.786	6.487	2055.83***	1980
SLK	1.542	1.221	0.067	8.171	2.606	11.506	7891.280***	1980
SIZE	15.579	1.495	10.763	20.256	-1.257	6.111	1310.732***	1980
INDEBT	0.165	0.145	0	1.236	1.226	5.357	918.452***	1980
SV	0.334	0.348	0.001	2.515	3.051	15.718	15879.56***	1980
FD	1.483	1.232	0.047	10.107	3.379	20.032	25520.08***	1980

S.D. = standard deviation, Sk. = skewness, K. = kurtosis, and J-B = Jarque-Bera test for normality. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Variables are investment efficiency (IED), CSR disclosure quantity score (DQt), CSR disclosure quality score (DQl), high quality disclosures (HDQ), low quality disclosures (LDQ), slack (SLK), size of firm (SIZE), level of firms debt holdings (INDEBT), sales volatility (SV), firms Financial distress (FD), CSR disclosures targeted towards community (COM), CSR disclosures targeted towards environment (ENV), CSR disclosures targeted towards customers (CUST), CSR disclosures targeted towards employees (HR).

is measured by dividing total liabilities on total assets. Sales volatility measures the standard deviation of sales over the five previous years (SV). Financial distress is measured by Z-Score (Altman, 1968) (FD). A dummy variable is used to control for industry effects (IND) as it is possible for investment efficiency to fluctuate between industries. If the company is active in one of the industries, the dummy variable has a value of 1 and zero otherwise. Year fixed effect (TIME) is also controlled for any time trend present in the data.

5.4 Correlation Analysis

As the distribution is non-parametric therefore Spearman's Rank Correlation (rho) is employed to check the degree of correlation amongst different variables.

The correlation table shows there is a positive association between investment efficiency and DQt and DQl. In Table 5.3 and Table 5.4 the HDQ has a significant

TABLE 5.3: Correlation Analysis of CSR Disclosure and Investment Efficiency Relation (Pakistan)

	IED	DQt	DQl	HDD	LDD	COM	ENV
VIF		1.06	1.05	1.03	1.02	1.01	1
IED	1						
DQt	0.212***	1					
DQl	0.211***	0.628***	1				
HDD	0.146***	0.602***	0.623***	1			
LDD	-0.113***	-0.580***	-0.642***	-0.371***	1		
COM	0.033	0.038	0.050**	0.021	-0.018	1	
ENV	0.038*	0.345***	0.341***	0.326***	-0.053**	0.072***	1
CUST	0.160***	0.799***	0.675***	0.423***	-0.348***	0.011	0.271***
HR	0.155***	0.666***	0.659***	0.421	-0.351***	0.011	0.339***
SLK	0.275***	0.075***	0.070***	0.094***	-0.066***	-0.017	0.022
SIZE	0.094***	0.490***	0.460***	0.360***	-0.208***	-0.044*	0.223***
INDEBT	-0.196***	-0.192***	-0.188***	-0.081***	0.136***	0.080***	0
SV	0.102***	0.061**	0.036	-0.040*	-0.063**	0.043*	-0.005
FD	0.137***	0.162***	0.143***	0.107***	-0.109***	-0.027	0.035
	CUST	HR	SLK	SIZE	INDEBT	SV	FD
VIF	1.03	1.02	1.1	1.07	1.21	1.17	1.18
CUST	1						
HR	0.505***	1					
SLK	0.063***	0.078***	1				
SIZE	0.334***	0.287***	-0.035	1			
INDEBT	-0.114***	-0.115***	-0.306***	0.025	1		
SV	0.069***	0.038*	-0.021	-0.040**	-0.115***	1	
FD	0.152***	0.105***	0.047**	-0.031	-0.159***	0.345***	1

***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Variables are investment efficiency (IED), CSR disclosure quantity score (DQt), CSR disclosure quality score (DQl), high quality disclosures (HDQ), low quality disclosures (LDQ), slack (SLK), size of firm (SIZE), level of firms debt holdings (INDEBT), sales volatility (SV), firms Financial distress (FD), CSR disclosures targeted towards community (COM), CSR disclosures targeted towards environment (ENV), CSR disclosures targeted towards customers (CUST), CSR disclosures targeted towards employees (HR).

positive correlation with IED, whereas LDQ is significantly and negatively correlated with IED. Moreover, COM and ENV negatively correlates with IED, whereas CUST and HR correlate positively with IED in the case of Chinese firms. For Pakistani firms the COM and ENV insignificantly correlates with IED, whereas CUST and HR correlates positively with *IED*. All of these findings are aligned with our hypotheses.

Additionally, *SLK*, *SV* and *FD* positively correlates with IED whereas, *SIZE* and *INDEBT* negatively correlates, which is consistent with the results of previous studies. Finally, the correlation of less than 0.55 between explanatory variables indicates that multicollinearity is not a big problem, hence the chosen model is appropriate.

TABLE 5.4: Correlation Analysis of CSR Disclosure and Investment Efficiency Relation (China)

	IED	DQt	DQI	HDD	LDD	COM	ENV
VIF		1.02	1.06	1.03	1.02	1.03	1
IED	1						
DQt	0.194***	1					
DQI	0.234***	0.784***	1				
HDD	0.259***	0.371***	0.499***	1			
LDD	-0.118***	-0.592***	-0.731***	-0.369***	1		
COM	-0.28**	-0.013	-0.015	-0.029*	-0.042***	1	
ENV	-0.001	-0.044	-0.008	-0.083***	-0.039**	0.401***	1
CUST	0.007**	0.003**	0.016	0.028*	0.058***	-0.276***	-0.485***
HR	0.046***	0.007	0.008	-0.049***	-0.066***	0.438***	0.899***
SLK	0.221***	0.084***	0.112***	0.147***	-0.071***	-0.152***	-0.021
SIZE	0.198***	0.208***	0.229***	0.287***	-0.141***	0.032**	-0.018
INDEBT	-0.198	-0.112***	-0.127***	-0.105***	0.085***	0.035**	0
SV	-0.054***	-0.004	0.001	0.012	-0.036**	-0.062***	-0.012
FD	-0.040**	-0.015	0.004	0.003	-0.001	0.016	-0.022
	CUST	HR	SLK	SIZE	INDEBT	SV	FD
VIF	1.06	1.01	1.06	1	1.05	1.01	1.03
CUST	1						
HR	-0.424***	1					
SLK	0.043***	-0.015	1				
SIZE	0.004	-0.02	0.013	1			
INDEBT	0.026*	-0.014	-0.217***	0.049***	1		
SV	0.01	-0.030*	-0.041**	0.004	0.015	1	
FD	0.052***	-0.005	0.038**	-0.408***	-0.015	-0.034**	1

***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Variables are investment efficiency (IED), CSR disclosure quantity score (DQt), CSR disclosure quality score (DQI), high quality disclosures (HDQ), low quality disclosures (LDQ), slack (SLK), size of firm (SIZE), level of firms debt holdings (INDEBT), sales volatility (SV), firms Financial distress (FD), CSR disclosures targeted towards community (COM), CSR disclosures targeted towards environment (ENV), CSR disclosures targeted towards customers (CUST), CSR disclosures targeted towards employees (HR).

5.5 Multivariate Analysis

5.5.1 Binary Logistic Regression Analysis

Keeping in consideration the key features of the data, parametric analysis is not suitable because of the problems listed below. Firstly, the Shapiro-Wilk test for normality of errors shows that the sample has not normal distribution. Secondly, the heteroscedasticity of data is affirmed by Breusch-Pagan/ Cook-Weisberg test. In light of these issues it is expected that non- parametric analysis, in particular, logistic regression will be more appropriate in studying the association of CSR reporting with investment efficiency. Logistic regression does not obligate that the data should be normal, linear and homoscedastic. Whereas, the data of this study

conforms to the key assumptions of logistic regression analysis which are linearity and independence of standard errors (Field, 2013).

The VIF is estimated for every variable in order to identify increase in standard errors due to multicollinearity. In Table 5 3 and Table 5 4 the resulting value of VIF for every variable is in the safe range, Which indicates that there is no issue of multicollinearity in the data (Field, 2013). Additionally, in pursuing Scott (1997), minimum of ten observations are used to perform logistic regression for any variable.

The industry and time effect in this logit model is fixed by using dummy variable technique to account for the differences between intercept industries. Econometric literature shows that a simple method to capture the heterogeneity amongst cross-sections is to allow each cross-section to have its own intercept (Gujarati, 2014; Asteriou, 2015; Greene, 2012).

5.5.2 CSR Disclosure and Investment Efficiency

To gain the insight in to the relationship between CSR performance and investment efficiency in a multivariate context, investment efficiency is regressed on the overall CSR while controlling for other non-CSR factors that may influence the firm's investment efficiency e.g. slack, size, indebtedness, sales volatility, financial distress and finally year and industry fixed effects. Our hypothesis is supported for demanding a positive association between CSR disclosure and investment efficiency because of easy access to finance, good reputation and high quality information of socially responsible companies. The estimated coefficient of DQt and DQl is positive and statistically significant at 1% level implying that the firms' engagement in CSR activities increases their investment efficiency.

Table 5.5 reports the coefficient estimates and odds ratio of independent variables on the probability of investment efficiency by firms. Results of estimating equation (2) support our first hypothesis for claiming a positive association between the probability of CSR disclosure and investment efficiency possibly because of easy access to finance and good reputation of socially responsible companies. In

particular, the parameter estimate on DQt is 0.96 for China and 0.30 for Pakistan; this implies that the quality disclosure of firms regarding their engagement in CSR activities increases their chances of being from the investment efficient group. The commonly used method to measure the effect of independent variables on the binary dependent variable is Odds ratio. In our model the CSR disclosure quantity increases the likelihood of being in the investment efficient group by 2.62 times for Chinese firms and 1.35 times for Pakistani firms, keeping all other factors constant. Hence, when CSR disclosure quantity is raised by a unit, the odds ratio is 2.62 and 1.35 times as large, and therefore the firm have 2.62 and 1.35 times more chances that these companies are a part of investment efficient class in China and Pakistan respectively. Similar results were found when DQt was replaced with DQI in Table 5.6. In addition the likelihood of Chinese firms being in the group of investment efficient companies increases with higher slack, higher firm size, lower indebtedness, lower sales volatility and higher financial distress. Whereas, the likelihood of Pakistani firms being in the group of investment efficient companies increases with higher slack, lower firm size, lower indebtedness, higher sales volatility and higher financial distress.

TABLE 5.5: Logistic Regression of CSR Disclosure Quantity on Investment Efficiency

Variable	China				Pakistan			
	Coefficient	Odds ratio	SE	Sig. (p-value)	Coefficient	Odds ratio	SE	Sig. (p-value)
DQt	0.966	2.629	0.381	0	0.306	1.359	0.116	0
SLK	1.132	3.102	0.435	0	0.364	1.44	0.09	0
SIZE	0.103	1.108	0.036	0.002	-0.525	0.591	1.062	0.046
INDEBT	-4.096	0.016	0.007	0	-2.35	0.095	0.054	0
SV	-0.348	0.705	0.076	0.001	0.374	1.453	1.03	0.04
FD	0.148	1.16	0.029	0	0.269	1.309	0.084	0
Intercept	-2.021	0.132	0.098	0.006	0.206	1.229	0.839	0.763
IND	Included				Included			
TIME	Included				Included			
Obs.				3564				1980
Pseudo R2				0.169				0.2

Note: Industry and Time effects are fixed by including dummy variables. Their results are not reported because each dummy is not significant.

Variables are CSR disclosure quantity score (DQt), slack (SLK), size of firm (SIZE), level of firms debt holdings (INDEBT), sales volatility (SV), firms Financial distress (FD), industry dummies (IND) and time dummies (TIME).

It is also find that company’s investment efficiency is closely related to almost all of the control variables. In particular the coefficient of firm size is statistically significant in most of the research models (p-values mostly ≤ 0.01). Among all the control variables, firm size is noticeably the most significant one (1 % level). This

result is in line with the corporate finance literature that argues firm size as a most relevant variable. Result of Pakistani firms imply that there are more chances that bigger companies have lesser opportunities for growth which negatively impacts their investment decisions and this justifies the negative association of firm size and investment efficiency. In contrast, Chinese firms that are larger in size invest more efficiently than smaller firms. The negative coefficient of INDEBT in all models is in line with the findings of Jensen (1986) because companies with high debts have to make interest payments and they have fewer chances to acquire further loans owing to overhang of existent loans (Myers, 1977). Hence their investment in even positive NPV projects is hindered which causes underinvestment. Sales volatility is associated negatively for Chinese firms whereas positively for Pakistani firms. The positive coefficient of FD is in line with the findings of Eisdorfer (2008). This significantly positive coefficient implies that companies under financial distress are less likely to deviate from investment efficiency. These results are not in-line with the previous research which argues that financial distress raises the chances of agency issues in the companies. Nonetheless, this relationship can be justified on the grounds of rigid behavior by the managers of distressed companies. In this scenario the companies are under high surveillance of stakeholders hence managers do not get much chances to get involved in agency issues. All the evidence collected from the set of our control variables is consistent and coherent with the results of earlier studies (Biddle et al., 2009; Chen et al., 2017).

H10a and **H10b** predicted that CSR disclosure quantity and quality significantly impact the investment efficiency of firms. The hypothesis is supported as the regression coefficients are statistically significant; hence it can be concluded that CSR disclosure quantity and quality are the determinants of investment efficiency in China and Pakistan.

5.5.3 High vs. Low CSR Disclosure Quality and Investment Efficiency

The effects of low vs. high quality CSR disclosure on investment efficiency are reported in Table 5.7 and Table 5.8 for China and Pakistan respectively. The

TABLE 5.6: Logistic Regression of CSR Disclosure Quality and Investment Efficiency

Variable	China				Pakistan			
	Coefficient	Odds ratio	SE	Sig. (p-value)	Coefficient	Odds ratio	SE	Sig. (p-value)
DQI	1.156	3.18	0.479	0	0.591	1.806	0.209	0.005
SLK	1.292	3.641	0.586	0	0.376	1.456	0.069	0
SIZE	0.079	1.083	0.037	0.021	-0.385	0.68	0.29	0.038
INDEBT	-4.108	0.016	0.007	0	-2.389	0.091	0.61	0
SV	-0.391	0.675	0.076	0.001	0.594	1.811	0.231	0.01
FD	0.136	1.146	0.03	0	0.256	1.292	0.068	0
Intercept	-0.957	0.383	0.299	0.219	-0.665	0.513	0.693	0.337
IND	Included				Included			
TIME	Included				Included			
Obs.				3564				1980
Pseudo R2				0.177				0.21

Note: Industry and Time effects are fixed by including dummy variables. Their results are not reported because each dummy is not significant.

Variables are CSR disclosure quality score (DQI), slack (SLK), size of firm (SIZE), level of firms debt holdings (INDEBT), sales volatility (SV), firms Financial distress (FD), industry dummies (IND) and time dummies (TIME).

effect of quantitative/high quality statements (HDD) on investment efficiency is positive and significant at 1% level implying that they are Substantive and hence contain value for the reader. On the other hand, the general description of CSR involvement is seen to have no significant effect on investment efficiency suggesting that disclosure statements that are just a lip service by the company doesn't have the potential to reduce the information asymmetry and consequently doesn't affect its investment efficiency.

The value of Odds ratio shows that high quality disclosure increases the likelihood of being in the investment efficient group by 2.60 times for Chinese firms and 1.49 times for Pakistani firms, keeping all other factors constant.

In other words, one unit increase in CSR disclosure quality, leads to the increment in odds ratio by 2.02 and 1.49 times , and therefore there are 2.60 and 1.49 times more chances that these companies are a part of investment efficient class in China and Pakistan respectively. On the contrary low quality CSR disclosure (LDD) significantly reduces the odds of firms being from the investment efficient group.

The results with regards to CSR disclosure are in line with the study of Schons and Steinmeier (2016). Altogether, the findings suggest that merely engaging in CSR disclosure activity is not beneficial for companies unless it is a meaningful disclosure of sustainability information. For good quality disclosure has potential

TABLE 5.7: Logistic Regression of High vs. Low Quality Disclosure on Investment Efficiency (China)

HDD				LDD				
Variable	Coefficient	Odds ratio	SE	Sig. (p-value)	Coefficient	Odds ratio	SE	Sig. (p-value)
DQI	0.956	2.603	0.245	0	-0.217	0.08	0.09	0.016
SLK	1.054	2.871	0.406	0	1.107	3.026	0.423	0
SIZE	0.031	1.031	0.035	0.365	0.126	1.135	0.037	0
INDEBT	-3.878	0.02	0.009	0	-4.181	0.015	0.006	0
SV	-0.39	0.676	0.075	0	-0.355	0.7	0.076	0.001
FD	0.133	1.142	0.028	0	0.148	1.159	0.029	0
Intercept	-0.981	0.374	0.284	0.196	-2.59	0.075	0.733	0
IND	Included				Included			
TIME	Included				Included			
Obs.				3564				1980
Pseudo R2				0.18				0.161

Note: Industry and Time effects are fixed by including dummy variables. Their results are not reported because each dummy is not significant.

***, **, and * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Variables are high quality disclosures (HDQ), low quality disclosures (LDQ), CSR disclosure quality score (DQI), slack (SLK), size of firm (SIZE), level of firms debt holdings (INDEBT), sales volatility (SV), firms Financial distress (FD), industry dummies (IND) and time dummies (TIME).

to lessen information asymmetry between the firm and its stakeholders, leaving the firm better placed to take advantage of future investment opportunities. H11a and H11b are accepted on the basis of logit regression results, where the positive impact is specifically driven by the HDD. Overall our findings propose that emerging markets can benefit from improved disclosure quality.

TABLE 5.8: Logistic Regression of High vs. Low Quality Disclosure on Investment Efficiency (Pakistan)

HDD				LDD				
Variable	Coefficient	Odds ratio	SE	Sig. (p-value)	Coefficient	Odds ratio	SE	Sig. (p-value)
DQI	0.402	1.495	0.219	0.006	-0.277	0.757	0.117	0.043
SLK	0.385	1.47	0.087	0	0.327	1.387	0.085	0
SIZE	-0.565	0.568	0.144	0.026	-0.574	0.562	0.155	0.037
INDEBT	-2.549	0.078	0.038	0	-2.762	0.063	0.035	0
SV	0.523	1.688	0.325	0.007	0.185	1.204	0.252	0.376
FD	0.26	1.297	0.075	0	0.311	1.365	0.092	0
Intercept	-0.359	0.698	0.414	0.545	-0.094	0.91	0.582	0.883
IND	Included				Included			
TIME	Included				Included			
Obs.				3564				1980
Pseudo R2				0.187				0.197

Note: Industry and Time effects are fixed by including dummy variables. Their results are not reported because each dummy is not significant.

Variables are high quality disclosures (HDQ), low quality disclosures (LDQ), CSR disclosure quality score (DQI), slack (SLK), size of firm (SIZE), level of firms debt holdings (INDEBT), sales volatility (SV), firms Financial distress (FD), industry dummies (IND) and time dummies (TIME).

All the regression models presented above have high significance level of 0.00 when $p < 0.05$ and Pseudo R-squares are also in a good range i.e. 0.16-0.19.

5.5.4 Target-Stakeholder of CSR Disclosure and Investment Efficiency

In a bid to confirm our next hypothesis, the analysis is extended to investigate the impact of different stakeholders as the target of CSR activities on investment efficiency of firms. The investment efficiency of firms is likely to be effected by primary stakeholders because they are high impact stakeholders as compare to secondary stakeholders (Max, 1995). So the CSR activities of firms that are focused on key stakeholders e.g. human resource and product & customer care are likely to be more relevant in explaining investment efficiency of firms.

TABLE 5.9: Logistic Regression of CSR Disclosure Target on Investment Efficiency

	China				Pakistan			
Variable	Coefficient	Odds ratio	SE	Sig. (p-value)	Coefficient	Odds ratio	SE	Sig. (p-value)
COM	-0.500	0.606	0.31	0.107	-0.288	0.765	0.47	0.536
ENV	-1.376	0.252	0.33	0.000	-0.514	0.713	0.72	0.474
CUST	0.242	0.784	0.11	0.030	0.908	2.500	0.41	0.027
HR	1.072	2.922	0.22	0.000	1.312	2.857	0.69	0.038
SLK	1.084	2.957	0.14	0.000	0.378	1.455	0.06	0.000
SIZE	-0.069	0.933	0.07	0.302	-0.622	0.613	0.26	0.016
INDEBT	-3.653	0.025	0.45	0.000	-2.552	0.085	0.51	0.000
SV	-0.306	0.735	0.11	0.006	0.407	1.502	0.20	0.04
FD	0.122	1.130	0.02	0.000	0.295	1.326	0.06	0.000
Intercept	3.049	2.103	0.37	0.000	-0.456	2.180	0.62	0.459
IND	Included				Included			
TIME	Included				Included			
Obs.	3564				1980			
Pseudo R ²	0.173				0.19			

Note: Industry and Time effects are fixed by including dummy variables. Their results are not reported because each dummy is not significant.

Variables are CSR disclosures targeted towards community (COM), CSR disclosures targeted towards environment (ENV), CSR disclosures targeted towards customers (CUST), CSR disclosures targeted towards employees (HR), CSR disclosure quantity score (DQt), slack (SLK), size of firm (SIZE), level of firms debt holdings (INDEBT), sales volatility (SV), firms Financial distress (FD), industry dummies (IND) and time dummies (TIME).

In Table 5.9 the baseline model is replicated through substituting the overall CSR disclosure score with four dimensions of community welfare (COM), environment (ENV), product & customer care (CUST) and Human resource (HR). The coefficients show a positive and highly significant relation between investment efficiency and CSR dimensions that are connected to primary shareholders i.e. CUST and HR. These results imply that firms that exhibit superior performance with respect to their primary stakeholders enjoy higher investment efficiency. Improving relations with firm's primary stakeholders can lead to valuable and intangible competencies (Hillman & Keim, 2001) and consequently improves the efficiency of its investments. In contrast insignificant coefficients of COM and ENV indicate that CSR dimensions that are not related to firm's primary stakeholders don't benefit firms internally. Company's use of corporate resources to pursue welfare activities of community can brand the firm as socially responsible but these actions are not very beneficial for investment efficiency. These results provide support for **H12a** and **H12b**; where the results are particularly driven by the CUST and HR dimensions of CSR disclosures.

5.6 Conclusion

This chapter studied the association between CSR disclosure and investment efficiency of Chinese and Pakistani listed non-financial firms. The objective of this chapter was to investigate the differing impact of CSR disclosure on investment efficiency depending on its quality and target stakeholder. The study analyzed whether all kinds of disclosures (i.e. high vs. low quality) have the same effect on investment efficiency of firms under study. Moreover, it was investigated whether the disclosure targeted towards any stakeholder has the same effect on investment efficiency or does it differ with the categorization of primary vs. secondary stakeholders. To study these relationships the Logistic regression was applied on a sample of 396 and 220 firms in China and Pakistan respectively for a period of nine years. The findings of this study add to the extant literature on the association between CSR disclosure and financial performance of firms.

Drawing on stakeholder theory this study looks in to the line of research and provides evidence of significantly different effect of CSR disclosure targeted towards primary vs. secondary stakeholders on firm-level investment efficiency. Moreover, not only the type of disclosure affects investment efficiency differently but the quality of disclosure significantly explains this relationship. The provided robust and strong evidence shows that effect of CSR disclosure on investment efficiency varies with the type and quality of disclosure.

The findings of our research work hint that if CSR activities are made strongly connected to primary stakeholders then such activities may not only benefit stakeholders but also extend increase in shareholder wealth. However, any such participation in social issues beyond the interest of primary stakeholders may adversely impact on firm's capabilities enhance shareholder wealth. Our results suggest that the CSR actions not only benefits stakeholders but also increase shareholders wealth when the activity is directly tied to primary stakeholders. Whereas participating in social issues beyond the primary stakeholders, however, may adversely affect a firm's ability to create shareholder wealth. In a comparison of high vs. low quality disclosure, higher quality CSR disclosure has been shown to positively impact the investment efficiency of firms whereas low quality disclosure doesn't benefit firms in this context.

5.7 Summary of Chapter

The aim of this chapter was to analyze in detail the association between CSR disclosure and investment efficiency by categorizing the disclosures in to high vs. low and disclosure targeted towards primary vs. secondary stakeholders. By analyzing the data through descriptive statistics, the results show that the disclosure in both countries is still mostly targeted towards community related activities which shows that the corporate sectors of China and Pakistan are going through an emerging phase of CSR where philanthropy is taken as a substitute for CSR. By analyzing the data through descriptive statistics, the results show that the disclosure in both countries is still mostly targeted towards community related activities which shows

that the corporate sectors of China and Pakistan are going through an emerging phase of CSR where philanthropy is taken as a substitute for CSR.

The results of multivariate analysis demonstrate that the CSR disclosure efforts of firms that are dedicated towards primary stakeholders e.g. human resource and product are likely to be more relevant in explaining investment efficiency of firms.

Moreover, the findings suggest that simply sustainability reporting does not benefit the firm if the content is not substantive. These findings confirm the association that was claimed in the hypothesis section which is summarized in the table below.

TABLE 5.10: Results Summary of Hypothesis Testing for Model 2

Independent Variable	Hypothesis	Result
DQt	Positive relationship exists	Accepted
DQI	Positive relationship exists	Accepted
HDD	Positive relationship exists	Accepted
LDD	Negative relationship exists	Accepted
COM	Negative relationship exists	Accepted
ENV	Negative relationship exists	Accepted
CUST	Positive relationship exists	Accepted
HR	Positive relationship exists	Accepted

Chapter 6

Conclusion

6.1 Introduction

In the light of increased attention towards CSR by corporate sector and academia, there is an increasing pressure on firms to report on their CSR activities. However, owing to the voluntary nature of sustainability reporting, the respective decision to adopt or not could be affected by the motives and preferences of different firms. In contemporary literature relationship between various characteristics of firms and CSR disclosure has been explored; further the impact of disclosing CSR performance to the public on firm performance has also been studied, but mixed results have been obtained. These studies employed various research models, theories and variables to study the determinants and consequences of CSR disclosure. Nevertheless, there is no consensus on what potentially impact the quantity and quality of sustainability reporting and the possible impacts of involving in such kind of voluntary activities on financial performance of firms. This study aims to fill this literature gap by identifying the factors that determine the quantity and quality of CSR disclosures in developing markets of China and Pakistan. Moreover, this study looks in to the impact that CSR disclosure quantity and quality have on investment efficiency of firms. The study first introduces the concept of CSR disclosure and the merits and demerits associated with it, then it moves on to the

critical review of existing literature and statement of hypotheses. After an extensive review of concerning literature on determinants and financial consequences of CSR disclosure, following limitations were identified.

1. CSR disclosure literature predominantly focuses on the quantity of disclosure so there have been calls in the CSR literature for researches that consider the quality aspect of this disclosure as well.
2. Research from developed economies is dominant in CSR disclosure literature with predominance of UK, US, Australia & New Zealand which is one of the motivations behind this study.
3. The existing literature on CSR disclosures does not give a comprehensive idea of the notion as mostly studies were focused on either philanthropic or environmental dimension of CSR.
4. The contemporary literature is limited to few variables as a determinant of CSR disclosures. Furthermore, the economic impact of CSR disclosure is also limited and report inconclusive results.

Along with the critical review in chapter 2, the theoretical framework is presented regarding the factors that determine CSR disclosures as well as its consequences. This chapter elaborates the background of CSR disclosure, its conceptual foundations, the determinants identified in the literature so far and its impact on financial performance of the companies. The chapter also identified various theories that are used in research to explain why firms report on their sustainability activities. This study based its arguments on stakeholder, legitimacy, institutional and agency theories. Stakeholder theory emphasizes on idea of working for all the stakeholders and not just shareholders and hence it advocates participation in sustainability activities, similarly legitimacy theory refers to corporate participation in social and environmental activities in a bid to gain legitimacy. Similarly, institutional theory presents the idea that firms indulge in CSR activities in a bid to avoid any regulatory issues. Next, in chapter 3 deductive methodology is adopted in order to develop indices for CSR disclosure quantity and quality, and two research

models are developed. In order to study the integrated framework, CSR disclosure quantity and CSR disclosure quality indices are developed consisting of 52 items and 9 items respectively. These indices were developed by considering the existing work in the field and changing it according to the Pakistani context. The study used annual report of firms for content analysis and the sample comprised of listed non-financial firms of China and Pakistan from the year 2009 to 2017.

Finally, in chapter 4 a critical evaluation of data is done and two research models are tested by employing multivariate analysis. In the first part of this chapter, the study identified the trend of CSR disclosure quantity and quality of China and Pakistan over the years. The trend analysis shows that CSR disclosure quantity and quality are growing with the passage of time.

The first model identifies the determinants of CSR disclosures in the non-financial listed firms of China and Pakistan for the period of nine years (2009-2017). This model comprises of nine variables that belong to three categories of, firm specific features, governance structure and ownership structure. This model is based on the argument that companies are different in their features and these features determine its quantity and quality of CSR disclosures.

In chapter 5, the second model addressed the impact of CSR disclosure on the investment efficiency of firms in China and Pakistan for the period of nine years (2009-2017). This model argues that CSR disclosure quantity and quality improves the investment efficiency of firms in these economies.

These two research models used proxies for dependent and independent variables. The focal variable of CSR disclosure quantity was created by developing an index and assigning score to it by employing content analysis technique.

The main findings of the study as reported in chapter 4 and 5 will be summarized in the following section.

6.2 The Main Findings

The objective of this study was to identify the determinants and consequences of CSR disclosure quantity and quality in listed firms of China and Pakistan. This

objective was accomplished by employing a cross-sectional data and studying the variables that have a significant impact on CSR disclosure quantity and quality. Further, the study examined the impact the CSR disclosure quantity and quality have on investment efficiency of firms.

Corporate social responsibility has gained substantial attention over the years by corporate managers as a strategic choice of enhancing firm value. Our analysis was based on descriptive analysis of the data of 396 Chinese listed firms and 220 Pakistani listed firms over the period of 2009-2017. The result revealed that there was a significant variation between the disclosure quantity of Chinese firms but the quality is nearly similar. In addition, the data shows that both the quantity and quality of disclosures are improving with each passing year because of guidelines issued by regulatory bodies on how and what to report. Moreover, the corrective actions taken by these bodies through punishing and blacklisting the socially irresponsible firms can be a possible reason behind Chinese firms disclosing more on their CSR activities.

The results of Pakistani data show that both the quantity and quality of disclosures are increasing because of the General order passed by SECP, which asked the listed firms to report on their sustainability activities. Although, there is an increasing trend in the quantity and quality of disclosures by listed firms but the growth has been slow, a possible reason behind this slow growth is the absence of any guidelines on CSR reporting by any regulatory body of Pakistan. The results showed that there is a constant improvement in quantity as well as quality of CSR disclosures by firms in both markets. The trend is increasing but with a slow pace.

The main research questions of this study will be answered in upcoming sections. These questions are;

1. What are the determinants of CSR disclosures in listed companies of China and Pakistan?
2. Does CSR disclosure quantity affect investment efficiency of listed companies in China and Pakistan?

3. Does CSR disclosure quality affect investment efficiency of listed companies in China and Pakistan?
4. Do the implications on investment efficiency the same for low and high quality of CSR disclosures by the listed firms of China and Pakistan?
5. Do the implications on investment efficiency the same for CSR disclosures targeted towards primary vs. secondary stakeholders by the listed firms of China and Pakistan?

Answer to these research questions would significantly contribute in the CSR disclosure literature and especially in the literature regarding the quality of CSR disclosure. The findings to above mentioned research questions are presented in the next section.

6.2.1 Determinants of CSR Disclosure

The objective of this section was to find the factors that determine the quantity and quality of CSR disclosures in China and Pakistan. To find these determinants nine variables were analyzed. These variables were firm size, profitability, indebtedness, board independence, board size, family ownership, multiple directorship, institutional ownership and political connection. Multiple regression analysis was used on a sample of non-financial firms from China and Pakistan in the period from 2009-2017 and the findings are explained below.

For China six variables out of the nine were found to be significantly impacting the quantity as well as quality of CSR disclosures. These six relevant variables are firm size, firm profitability, firm indebtedness, board independence, family presence, and institutional ownership. In the case of Pakistan eight variables were found to be the significant determinants of CSR disclosure quantity and quality which are firm size, firm profitability, firm indebtedness, board independence, board size, family presence, multiple directorship and political connections. The negative relationship between family ownership and CSR disclosure has implications for foreign investors in China and Pakistan because normally investors from Anglo-

American countries have high priority for sustainability disclosure by firms. This doesn't seem to be the case in Chinese and Pakistani context.

The theoretical framework adopted in the thesis describes the regression results by explaining that various characteristics of firms determine how they cater the demand of their stakeholders at different levels. The empirical results show that three features i.e. profitability, indebtedness and board independence have the strongest impact on CSR disclosures in Pakistan whereas profitability indebtedness and family ownership features impact the CSR disclosures most in China. Similarly, institutional ownership, multiple directorships and board size were the least impactful variables in Pakistan and board size, multiple directorships and political connectedness in China.

6.2.2 Impact of CSR Disclosure on Investment Efficiency

The objective was to study the empirical association between CSR disclosure and investment efficiency of firms as theory suggests an inverse relation between CSR disclosure and information asymmetry. Moreover, studies in agency theory state that more transparency increases firm value by improving managers' investment decisions. The research model was tested by employing multiple regression analysis and results show that CSR disclosure is a mean to improve firm's investment efficiency. The reason evident from this relationship specifies that sustainability disclosure of a firm mitigates information asymmetry on the one hand and improves the reputation of a firm on the hand, which eventually improves investment efficiency of the firm. These findings are in line with agency theory. Overall our results show that increased CSR disclosures have significant real impact on internal investment decisions via the mechanism of increased information accessibility to the outsiders. Thus our findings suggest that investment efficiency is affected not only by the quantity of information disclosed as claimed by previous research but also the quality of disclosures affect investment efficiency. This also refers that investors can consider greater disclosure level as a signal for efficient investment by firms. Overall, the provided robust and strong evidence is consistent with our expectations that CSR disclosure is a driver of investment efficiency

in corporations. Our findings are in line with observations of international survey of CSR reporting by KPMG (KPMG 2013) that CSR disclosure quality is more relevant now is more effective way for firms to connect with their relevant stakeholders. KPMG, 2011 report stressed on the fact that there is an increasing demand for high quality CSR disclosure and firms which fail to do so would fail to gain the confidence of its stakeholders including investors. According to the survey by KPMG in 2015, the report emphasized on the fact that high quality CSR disclosures possess many benefits for the firms which include gaining competitive advantage over other firms and be the leaders of their industry.

6.2.3 Difference Between the Impact of High vs. Low CSR Disclosure Quality on Investment Efficiency

This chapter has inspected whether high and low quality disclosure affect investment efficiency differently because theory shows a connection between information asymmetry reduction and voluntary disclosure. Overall, our results suggest that internal investment decisions have significantly affected by the augmented disclosure quality, through increasing the sum of information reachable to the outsiders. Thus, our findings propose that investment efficiency is affected by CSR disclosure differently with the variation in quality. This discovery indicates that stockholders can see organizations with greater disclosure quality as a sign of organizations with greater investment efficiency while assessing the value of companies.

6.2.4 Difference Between the Impact of CSR Disclosure Targeted Towards Primary vs. Secondary Stakeholders on Investment Efficiency

Our findings show that adopting primary stakeholder management strategy can produce top-line growth for the company. Capitalizing in key stakeholders appears valuable because those investments become a source of creating inimitable resources for the firms that are not easy to be topped by its competitors, thus

leading to a competitive benefit. Alternatively, as demonstrated by our investigation, capitalizing in secondary stakeholders doesn't promise financial rewards because of transactional nature of these investments that can be copied easily by the rival firms. Thus our findings suggest that managers should give more priority to primary stakeholder group because it offers the most benefit to firms. Nonetheless, normatively, it is not suggested that companies completely disregard secondary for primary stakeholders, but somewhat that they thoroughly reconsider the opportunity expenses of ranking one group over the other.

Our findings suggest that exhibiting responsible behavior towards employees and customers as a primary stakeholder group might be a source of positively influencing company's performance. On the contrary, the conclusions with respect to secondary stakeholders offered different results than the primary stakeholders. Community welfare and environmental protection activities, were insignificantly related to firm's investment efficiency. This finding raises an important question of whether giving back philanthropically to the public leads to advantages for firms. Friedman (1970) contend that any use of stakeholder moneys outside the ways of generating a revenue is a waste of those assets and this practice will not benefit firm financially.

Generally, our outcomes recommend that disclosure level has larger consequences than formerly acknowledged. This study document that high quality CSR disclosures and CSR actions directed towards primary stakeholders like employees and customers significantly increases the investment efficiency of firms.

6.3 Contribution of the Study

The theoretical and empirical analysis of this thesis contributes significantly to the theory and the existing knowledge regarding CSR disclosure in developing countries like Pakistan and China in the following ways.

The theoretical contributions of the study are as follows.

Firstly, the results of this thesis contribute to the CSR disclosure literature specifically in regards to agency, legitimacy, stakeholder and institutional theory. There

is limited empirical evidence available on the topic studied from developing countries. Moreover, the literature available has shown mixed results regarding the determinants and consequences of CSR disclosure. By employing the stakeholder theory the results show that the level and quality of CSR disclosure has increased over time in China and Pakistan. The CSR disclosure of Chinese and Pakistani firms is mainly focused on four categories i.e., community, customers and product, environment and human resource. The most focused area of CSR disclosure in both countries is community followed by environment in China whereas human resource in Pakistan. The CSR efforts are targeted mainly towards community in both countries because community is believed to be the most powerful stakeholder. The findings show that Chinese and Pakistani firms consider all the stakeholders while making sustainability disclosure. They are focused on not only a single stakeholder but they cater the need of all the stakeholders. Such a pattern shows that the main stakeholders also get benefited when firms take care of all the other stakeholders' expectations. Thus it could be concluded that firm's financial performance increases when they serve the needs of various stakeholders. Moreover, by looking at the differential impact of sustainability disclosure targeted towards primary vs secondary stakeholder, the results show that firms have to respond to the powerful stakeholders and in return get financial benefit by doing so. These findings provide further strength to the stakeholder theory that there are categories of stakeholders and by meeting the needs of some stakeholder group benefits the firm more as compare to rest of the groups. Therefore, it could be concluded that stakeholder theory can be used to explain the disclosure related to sustainability activities of the Chinese and Pakistani firms. Furthermore, with regards to legitimacy theory the findings reveal that big firms report more on their sustainability involvement in order to fulfill the expectations the society has towards them. Similarly, as per legitimacy theory, there is this expectation from independent board that it would take care of all the stakeholders to maintain its reputation in the market. The results lend support to this theory by showing that as the participation of independent directors increase in the board the companies become more prominent and accountable by providing more information regarding their sustainability involvement to remain legitimate in the eyes of stakeholders. The results

of this study back the contention of agency theory that family ownership raise the principal-principal conflict, which increases the influencing ability of family members over calling the shots and protect their own benefits while making decisions in the firm.

The methodological contribution of the study is that separate indices for CSR disclosure quantity and CSR disclosure quality were developed according to Pakistani market. Previous literature either considered CSR disclosure quantity as a proxy for quality or ignored the qualitative aspect altogether. This study bridges the knowledge gap that exists in methodological part of CSR literature by designing indices for CSR disclosure quantity and quality for Pakistani firms. The CSR disclosure indices are designed by employing the content analysis technique to gather primary data. This work adds to previous findings on the one hand and contributes to the scarce work on measuring CSR disclosure quantity and quality in emerging markets like China and Pakistan.

Moreover, this is the first study to exhaustively explore the impact of CSR disclosure on investment efficiency of the Pakistani firms. In contrast to previous literature this thesis comprehensively studied the association between CSR disclosure and investment efficiency of Chinese and Pakistani firms. The prior work in this area employed a small sample size, a shorter time frame or was based on specific industries. Therefore, this study employed a sample of two developing markets over a period of nine years and considered all the industries except financial industry because of differing nature of their businesses which makes it quite in-comparable. Additionally, this work contributes significantly in the literature of CSR disclosure specifically by studying its impact on firms performance because prior literature reports contradicting results in this regard.

Furthermore, a significant contribution is made towards the understanding of CSR disclosure practices in the context of Chinese and Pakistani firms. The focus of prior literature has mostly been the developed economies and the developing economies have largely been ignored in this context. Our results exhibit a substantial rise of CSR disclosure in both China and Pakistan over the years under

study. The results recommend that the governments of both countries should encourage the firms by providing various incentives for participating and reporting on their CSR performance. Moreover, the findings reveal that Pakistani firms have no specific guidelines or regulations regarding how they can participate and report on their sustainability performance. Presently, the companies are reporting their CSR related information in either different section of their annual reports or issue a standalone CSR report. This approach results in a great variation between the content and quality of sustainability reporting by Pakistani firms. Our findings recommend that there should be a proper CSR framework that specifies how firms from various industries should participate and report on CSR activities that would lead to a comprehensive and high quality disclosure as of other countries. Moreover, the findings of this study can be useful for the regulatory bodies in a bid to design a standard CSR disclosure framework that is applicable to all the firms for improving corporate transparency. Finally, while literature has examined the impact of CSR on investment efficiency, the comprehensive examination distinguishing between high vs. low quality CSR disclosure and primary vs. secondary stakeholder as a target of these activities has not been examined explicitly. This study is one of the first attempts to investigate this by building mainly on stakeholder theory and contending that CSR disclosure of a firm increases its investment efficiency when it is substantial and targeted towards primary stakeholder. A possible reason behind this relationship is that CSR disclosure of a firm on the one hand reduces information asymmetry while on the other hand improves the reputation of firms and hence increases investment efficiency of firms. This study found an empirical support that high quality CSR disclosure affects investment efficiency of a firm positively whereas symbolic disclosure has no effects.

6.4 Practical Implications of the Study

Our findings add to the extant literature on the link between CSR disclosure and investment efficiency by differentiating between high and low quality of CSR disclosures. This investigation has essential implications for managers. Our findings clearly show that CSR reporting improves investment efficiency subject to

conditions. As awareness and skepticism in general regarding corporate behavior including sustainability reporting has risen dramatically, the camouflaging tactics like green-washing can no more be considered possible. Moreover, CSR reporting is found to be not merely an expense but also an investment and management strategy to enhance corporate performance. This shows that management should work towards improving the CSR disclosure quality of their firms in order to benefit from it. Additionally, such findings increase the confidence of socially responsible managers and encourage them to further pursue and report on their CSR engagements. CSR performance and reporting contribute positively to the society, while simultaneously benefiting the firms by improving their investment efficiency. On the contrary, the management of companies that are not very socially responsible need to spend on sustainability related actions especially customer and human resource welfare because it reduces investment inefficiency of companies.

With the consequence of this study, the Government of Pakistan, while pursuing its Foreign Direct Investment attraction policy, can make strategies for improving CSR disclosure quality to attract foreign capital in its stock market. Thus, engagement and disclosure of CSR activities can be used as a strategy to attract investors and improve financial performance of companies. The results would also help the policy making and regulatory organizations like PSX to ensure a certain level of CSR disclosure quality by the firms through introducing new requirements in order to decrease the information asymmetries. Our results suggest that to curb the widespread investment inefficiency of listed firms in Pakistan, the regulatory authorities should help and guide firms to increase the CSR disclosure quality.

The findings of our current work have practical implications. The environmental threats are evident and social performance of firms is becoming under observation. Moreover, CG failures are partly considered responsible for continuing weak financial conditions of firms. Such circumstances encourage all relevant stakeholders including regulating bodies, government agencies etc. to pressurize firms for improving their sustainability performance. Our results would help these authorities in designing regulatory programs by guiding them in developing customized policies for different governance and ownership systems in place. Our findings

recommend that firms based on closely held ownership need to be given serious attention. Additionally, in a bid to attain improved sustainability performance, diversified shareholding may be favoured or requisite codes may be framed to enhance the social performance of firms having concentrated ownership.

The findings also suggest that as awareness and skepticism in general, regarding corporate behavior including sustainability reporting has risen dramatically, therefore camouflaging tactics like green washing can no more be considered possible. Moreover, such findings increase the confidence of socially responsible managers and encourage them to further pursue and report on CSR activities. CSR reporting and performance contributes positively to the society, while simultaneously benefiting the firms by improving their investment efficiency. On the contrary the management of companies that are not very socially responsible need to spend on sustainability related actions because it reduces investment inefficiency of companies.

Our findings add to the existing literature on the connection between CSR and investment efficiency by differentiating between disclosure quality of CSR activities and targets of such activities. This investigation has essential implications for managers. Firstly, these findings would enable them to adopt a CSR strategy that significantly enhances their investment efficiency by having a better understanding of the contingent nature of CSR and allocate resources accordingly. In the competitive environment the resources are limited for firms and channeling these resources towards CSR comes at some expense. Our findings clearly show that CSR participation improves investment efficiency but under certain conditions. Moreover CSR participation is not merely an expense but also an investment and management strategy to enhance corporate performance.

Secondly, these results suggest managers that while companies have gotten away in the past with camouflaging tactics like green-washing but it's not possible anymore because the awareness and skepticism in general regarding corporate behavior which includes their CSR actions has risen dramatically.

Third, these findings should increase the confidence of socially responsible managers and encourage them to further pursue CSR activities, because these kinds

of activities contribute positively to the society while simultaneously benefiting the firms by improving their investment efficiency. Whereas, the management of companies that are not very socially responsible need to spend on sustainability related actions especially customer and human resource welfare because it reduces investment inefficiency of companies.

6.5 Limitations of the Study

This study has few limitations that could be addressed in future researches. Firstly, this study considers only the annual reports of firms for data collection, which can portray an incomplete picture of sustainability activities of firms listed on PSX. Firms can share their sustainability performance with stakeholders via various other sources like websites, promotional brochures, newspaper, television/radio advertisements etc. so this work is limited to only annual and standalone reports of Pakistani listed companies. Secondly, this study is limited to the firms of Chinese and Pakistani markets instead of a comprehensive international sample. Therefore, the findings cannot be generalized. Thirdly, this study used content analysis for developing CSR disclosure indices which is prone to human error. Prior literature shows that content analysis is subject to increased error when manually done by humans rather than with computer softwares.

This study has treated family firms as homogeneous entities. This practice over-generalizes the results and limits the explanatory power.

The findings of this study are limited to specific context and time frame and hence cannot be generalized.

6.6 Future Research Directions

The following suggestions can be considered by future researchers in this area. Firstly, this study focuses only on two markets i.e. China and Pakistan, which confines the generalizability of results. Future researchers can extend the sample by including firms from around the world and perform a comparative study between

developing and developed markets in a bid to shed light on the differences between the quantity and quality of CSR reporting and its impact on investment efficiency of firms. The cross country comparison could be done in future studies to establish whether our results hold.

Secondly, this study employed content analysis as a mean to gather data from annual and standalone reports regarding CSR performance of firms. Future investigations can extend this study by incorporating other sources like websites, promotional brochures, newspaper, television/radio advertisements etc. to examine the quantity and quality of CSR disclosures.

Thirdly, this study treated family firms as homogeneous entities. Hence, it is recommended for future researchers to incorporate family heterogeneity e.g. single vs. multi- generation etc. in extending this research model.

Fourthly, this research used one indicators of financial performance i.e. investment efficiency. Further studies can employ additional indicators of financial performance e.g. financial distress, to study the association between CSR disclosure and firm's financial performance. This would improve the understanding of CSR disclosures importance in the corporate world. Moreover, further control variables can be added to the study to check its reliability.

Fifthly, future researchers can study whether the results hold for all kind of firms e.g. does CSR disclosure increases profitability of all firms or only the firms with

Lastly, further studies can incorporate the institutional factors like cultural and/or stakeholder orientation in to their research models to further improve the generalizability of their results.

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Appendix-A

TABLE A1: Industry classification & CSR score of Chinese firms

Industry name	No. of firms	No. of years examined	Avg. DQt	Avg. DQI
Agriculture, forestry, livestock farming& fishery	48	432	0.452	0.3025
Mining	40	360	0.7895	0.578
Manufacturing	51	459	0.7035	0.5055
Electric power, gas & water production and supply	35	315	0.8295	0.587
Construction	33	297	0.7145	0.499
Transport and storage	32	288	0.7255	0.5015
Information Technology	32	288	0.2995	0.206
Wholesale and retail trade	29	261	0.704	0.50475
Real estate	28	252	0.688	0.483
Social service	28	252	0.444	0.299
Communication & Cultural Industry	21	234	0.675	0.455
Miscellaneous	19	225	0.2935	0.195
Total	396	3564	0.607	0.425

TABLE A2: Industry classification & CSR score of Pakistani firms

Industry name	No. of firms	No. of years examined	Avg. DQ _t	Avg. DQ _I
Textile spinning	25	225	0.076	0.025
Sugar & Allied	20	180	0.644	0.178
Chemical	18	162	0.599	0.391
Textile composite	17	153	0.311	0.102
Cement	16	144	1.152	0.33
Food & Personal Care	14	126	0.671	0.193
Power generation & Distribution	11	99	0.65	0.179
Fertilizer	10	90	1.513	0.121
Engineering	10	90	0.479	0.106
Miscellaneous	9	81	0.327	0.085
Pharmaceuticals	9	81	1.507	0.438
Auto assembler	7	63	0.819	0.162
Paper & Board	7	63	0.735	0.165
Textile weaving	6	54	0.121	0.034
Auto parts & accessories	5	45	0.722	0.2
Oil & Gas marketing	5	45	0.682	0.194
Glass & Ceramics	5	45	0.745	0.197
Synthetic & Rayon	4	36	0.128	0.033
Refinery	4	36	0.85	0.221
Oil & Gas exploration	4	36	1.215	0.388
Cable & Electrical	4	36	0.418	0.111
Transport	3	27	0.324	0.071
Technology & Communication	3	27	0.543	0.166
Leather & Tanneries	2	18	0.298	0.106
Woollen	1	9	0.311	0.075
Vanaspati & Allied	1	9	0.207	0.045
	220	1980	0.565	0.15

TABLE A3: Testing for Multicollinearity using VIF & Tolerance values

Variable	Pakistan		China	
	VIF	Tolerance	VIF	Tolerance
SIZE	1.86	0.536	1.08	0.928
PROF	1.39	0.719	1.02	0.976
INDEBT	1.33	0.753	1.05	0.953
BIND	1.47	0.679	1.05	0.953
BSIZE	1.45	0.688	1.03	0.968
MD	1.09	0.914	1	0.997
PC	1.13	0.886	1.04	0.962
IO	1.34	0.746	1.01	0.997
FAM	1.55	0.643	1.11	0.9

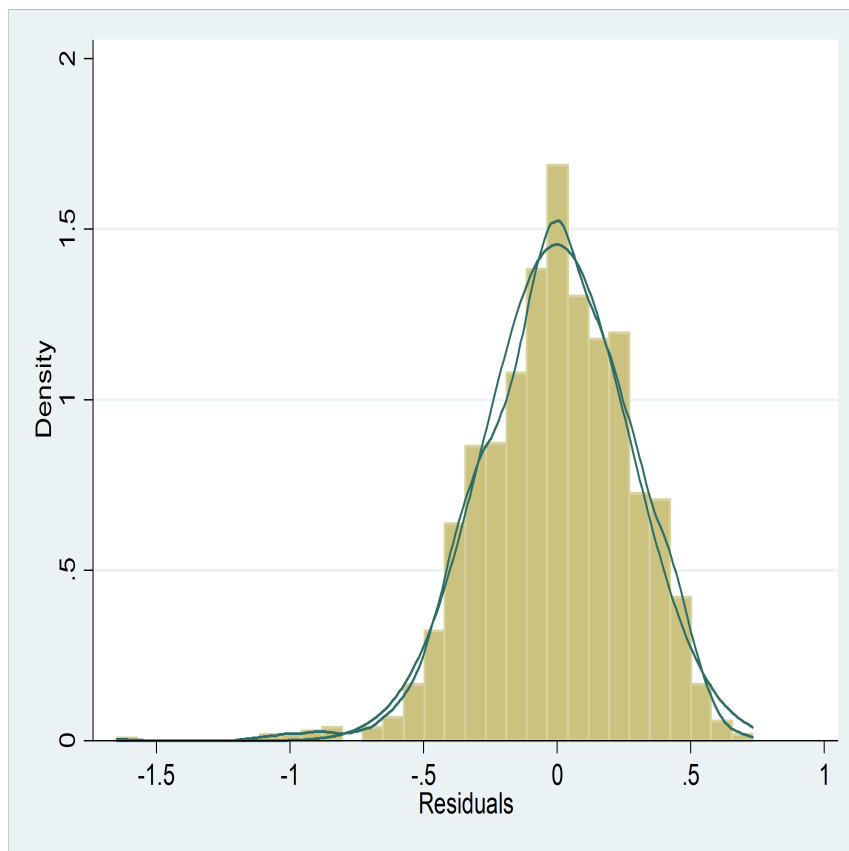


FIGURE A1: CSR disclosure quantity (Pakistan)

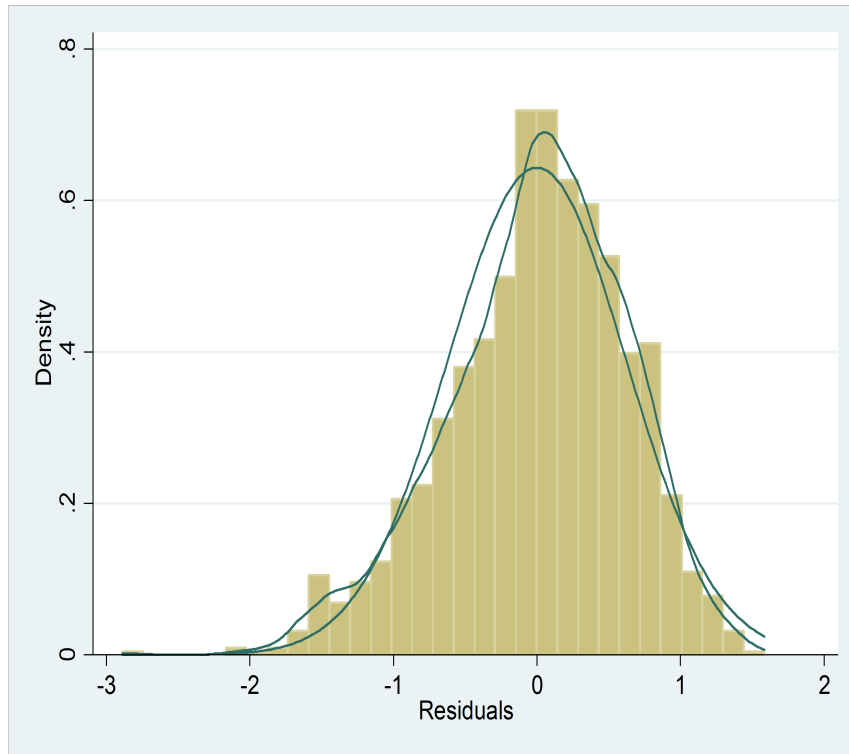


FIGURE A2: CSR disclosure quality (Pakistan)

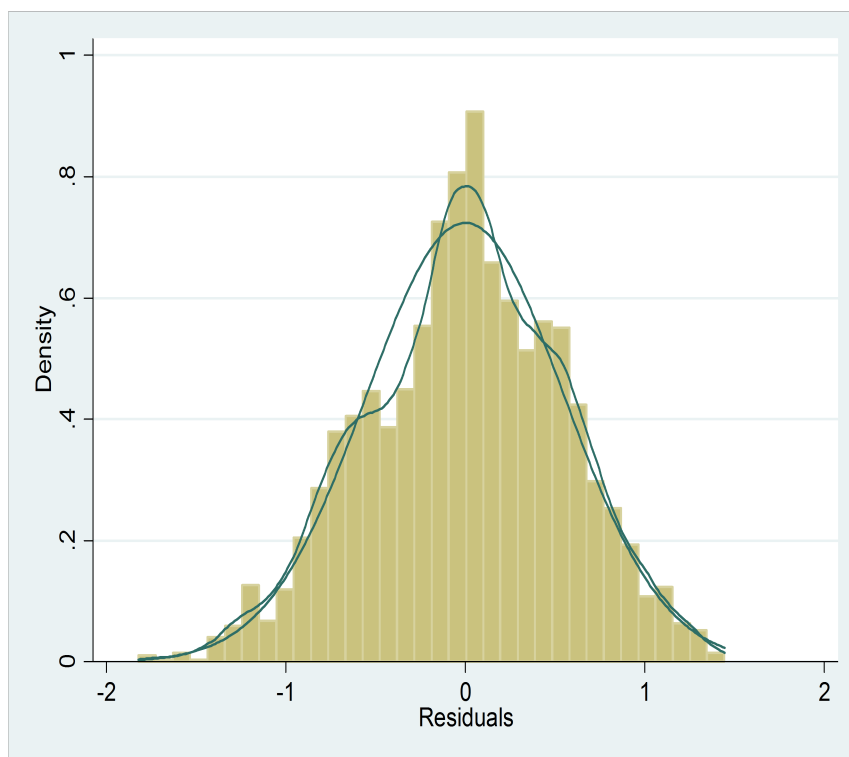


FIGURE A3: CSR disclosure quantity (China)

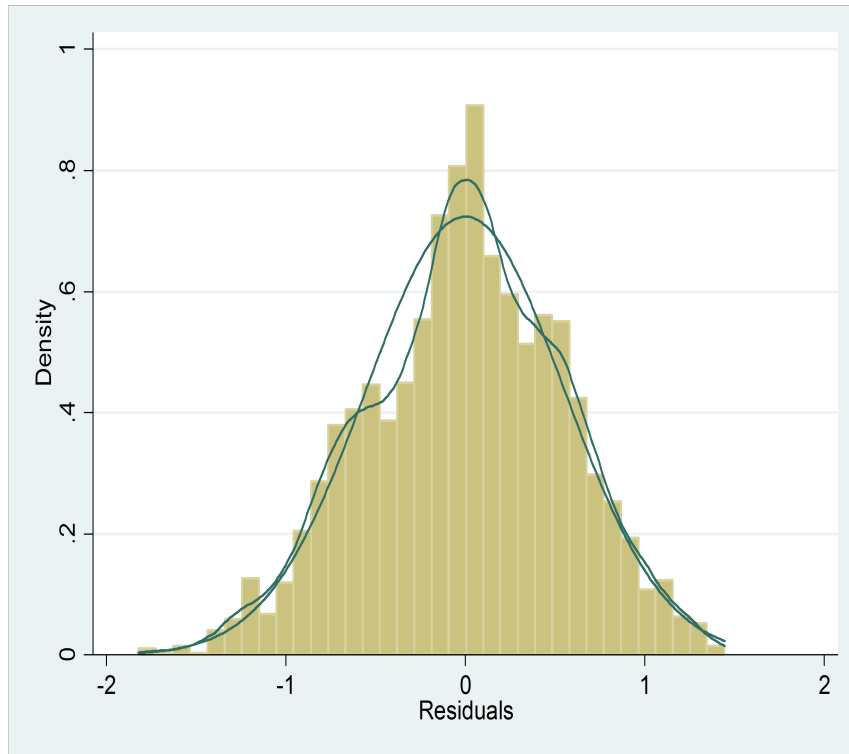


FIGURE A4: CSR disclosure quality (China)

TABLE A4: Stationarity check using Augmented Dickey-Fuller test

	China		Pakistan	
Variables	Test statistic	P-value	Test statistic	P-value
SIZE	-0.952	0.000	-11.268	0.000
PROF	-0.994	0.000	-18.543	0.000
INDEBT	-1.261	0.000	-17.72	0.000
BIND	-0.925	0.000	-18.918	0.000
BFSIZE	-1.999	0.000	-12.435	0.000
MD	-0.981	0.000	-43.486	0.000
PC	-1.018	0.000	-20.888	0.000
IO	-0.995	0.000	-12.257	0.000
FAM	-0.978	0.000	-11.696	0.000

TABLE A5: Checking endogeneity using Granger causality Wald test (Pakistan)

CSR disclosure quantity					CSR disclosure quality				
DV	Excl.	Chi2	Df	Prob.> Chi2	DV	Excl.	Chi2	df	Prob.> Chi2
SIZE	<i>DQt</i>	1.35	1	0.245	SIZE	<i>DQl</i>	2.103	1	0.147
PROF	<i>DQt</i>	2.55	1	0.11	PROF	<i>DQl</i>	2.475	1	0.116
INDEBT	<i>DQt</i>	0.177	1	0.673	INDEBT	<i>DQl</i>	0.307	1	0.579
BIND	<i>DQt</i>	0	1	0.991	BIND	<i>DQl</i>	0.8	1	0.777
BSIZE	<i>DQt</i>	0.893	1	0.344	BSIZE	<i>DQl</i>	1.834	1	0.176
MD	<i>DQt</i>	0.331	1	0.565	MD	<i>DQl</i>	0.992	1	0.319
PC	<i>DQt</i>	0.116	1	0.732	PC	<i>DQl</i>	1.642	1	0.2
IO	<i>DQt</i>	1.919	1	0.166	IO	<i>DQl</i>	0.546	1	0.46
FAM	<i>DQt</i>	0.151	1	0.697	FAM	<i>DQl</i>	0.126	1	0.722

TABLE A6: Checking endogeneity using Granger causality Wald test (China)

CSR disclosure quantity					CSR disclosure quality				
DV	Excl.	Chi2	df	Prob.> Chi2	DV	Excl.	Chi2	df	Prob.> Chi2
SIZE	<i>DQt</i>	0.02	1	0.885	SIZE	<i>DQl</i>	0.656	1	0.72
PROF	<i>DQt</i>	0.563	1	0.453	PROF	<i>DQl</i>	0.337	1	0.845
INDEBT	<i>DQt</i>	0.8	1	0.371	INDEBT	<i>DQl</i>	0.246	1	0.884
BIND	<i>DQt</i>	0.795	1	0.373	BIND	<i>DQl</i>	0.925	1	0.63
BSIZE	<i>DQt</i>	0.115	1	0.734	BSIZE	<i>DQl</i>	0.215	1	0.898
MD	<i>DQt</i>	0.029	1	0.864	MD	<i>DQl</i>	0.446	1	0.8
PC	<i>DQt</i>	1.243	1	0.265	PC	<i>DQl</i>	0.526	1	0.769
IO	<i>DQt</i>	0.034	1	0.853	IO	<i>DQl</i>	2.985	1	0.225
FAM	<i>DQt</i>	0.975	1	0.323	FAM	<i>DQl</i>	2.044	1	0.36