Major: FINANCE

IMPACT OF BOARD GENDER DIVERSITY ON FIRM PERFORMANCE WITH MEDIATING EFFECT OF CORPORATE SOCIAL RESPONSIBILITY: A CASE OF COVID-19

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Fall 2021

ACKNOWLEDGEMENT

Above all else, I want to say thanks to Allah Almighty who has led me through every intense time and made me realize that He is continuously listening to my prayers. Alhamdulillah!

I owe my most profound and earnest appreciation to my parents, supervisor who remained close during the intense and challenging experience of this project, exhibiting my work and settling on choice in regard to this all through the period of my Master program.

I am chosen to have had the supervision DR.KHALILULLAH who is expert in finance, major thanks to you for your consolation and having confidence in my capabilities. Much appreciated you for sharing your abundance of learning and using my abilities in a superior manner. Your commitment and responsibility in regulating this supposition is sincerely appreciable. This thesis would not have been conceivable without your backing.

Dear parents, your prayers to Allah, your support and your provision have made me accomplish one of the hardest objectives throughout my life. This is one of them!

Dear friend Noman Shoukat, you have a major part of this accomplishment and your support has shown me a ray of trust and encouragement.

Big thanks to all!

Haseeb Ali

// ABSTARCT

This study has focused mainly on investigating the relationship between board gender diversity, corporate social responsibility, and financial performance in non-financial firms of Pakistan. This study has considered board gender diversity as independent variable. Financial performance (represented by return on assets) is considered as dependent variable. Corporate social responsibility is used as a mediator. Size, growth, self-finance ratio, and tangibility are used as control variables. This study has finalized non-financial sector of Pakistan to testify the relationship between variables mentioned above. Annual financial statements of Pakistani non-financial firms are used for data collection regarding study variables from the period of 2019 – 2021 (10 quarters). A sample size of 50 non-financial firms (500 observations) is finalized to represent the entire non-financial sector of Pakistan. Collected data is then analyzed through statistical instruments such as correlation, regression, and mediation by using Strata software. Based on the findings of correlation and regression analysis, it is concluded that board gender diversity and corporate social responsibility impacts financial performance in non-financial firms of Pakistan. In addition, findings have proved that board gender diversity significantly impacts corporate social responsibility in non-financial firms of Pakistan. Finally, mediation analysis has proved the mediating effect of corporate social responsibility in relationship between board gender diversity and financial performance in non-financial firms of Pakistan.

Key Words: Board Gender Diversity, Corporate Social Responsibility, Financial Performance, Return on Assets, Size, Growth, Self-Finance Ratio, Tangibility, etc.

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Chapter 1

INTRODUCTION

1.1 Background of the Study

Corporate governance is comparatively a new concept in business world, whereas the business issues which are addressed through corporate governance are such issues which exist from the very first day business activities have started taking place (Fakir & Jusoh, 2020). After the global corporate scandals, the concept of effective corporate governance has come under great debate. The studies have revealed that countries having effective corporate governance practices tend to experience better growth and development within the corporate sectors (Jiang et al., 2021). With respect to the perceptions of several market analysts, performance of the corporate sector is completely influenced by corporate governance. Contrary to that, some of market analysts perceive that corporate governance is one if not the most important aspect of business world affecting the performance of the firm (Martinez-Jimenez et al., 2020). Within the corporate life cycle, the definition of corporate governance varies significantly. To strengthen the foundation of a business firm, corporate governance is considered as the highly significant function (Endrikat et al., 2021).

Corporate governance is defined as the set of practices and rules based on which the association amongst shareholders, stakeholders, and managers are governed within an organization (Liu et al., 2020). Business firms tend to attract investment and enhance their productivity as a result of corporate governance practices. In addition, shareholders' rights are protected, and corporate's objectives are attained with the help of corporate governance (Oware & Mallikarjunappa, 2019). Corporate governance is considered very important in distributing the responsibilities and rights between the numerous stakeholders of business entity including shareholders, managers, board, etc. Corporate governance is also contributing in ensuring that procedures and rules are clear which are necessary in making decision concerning corporate affairs (Yng & Hashim, 2019). Corporate governance has become a trending topic of discussion for regulators and researchers due to numerous high-profile corporate scandals taken place in recent past. Corporate governance is recognized as the internal mechanism to monitor and control the management

practices. Firms can attain higher performance through effective corporate governance (Ouni et al., 2020).

Board of directors is an important mechanism within any business firm, as BODs are responsible to lead and direct a firm along with providing protection to interests of firm's shareholders (Jarboui et al., 2020). To be specific, numerous functions are performed by board of directors including provision of information to supervisors, creating a link between the firm and its external environment, ensuring appointment, supervision, & remuneration of senior managers, and making decisions regarding strategies of the firm. Due to such important functions, board of directors is considered as highly important internal corporate governance control mechanism of any business firms (Naveed et al., 2021). Due to major responsibilities, BODs often have to face criticism from shareholders as a result on decrease within shareholders' value or corporate failures. Meanwhile, corporate failures could be caused as a result of lack of accountability, pursuing self-interests rather than focusing on firm's interests, and inappropriate monitoring by the board (Shahzad et al., 2019). Therefore, value and performance of a business firm mostly increases due to proper monitoring of disciplines by the board of directors (Martínez-Ferrero et al., 2021).

Recently, gender diversity on a board has gain significant attention from numerous entities such as public, academicians, corporations, and governments. A high public profile is maintained by gender diversity on a board due to policy statements from major institutional investors, shareholder proposals by advocacy groups and reports in the press (Dani et al., 2019). The interest within the issue of gender diversity and its role in improving firm performance has increased significantly after reporting of corporate scandals such as scandals in Parmalat, Tyco, WorldCom, and Enron. Corporate scandals taken place in firms mentioned above have forced practitioners to call for more board diversity (Pekovic & Vogt, 2021). There have been numerous theoretical arguments existing concerning the impact that female representation on boards of directors have on firm performance. However, there are mixed and contradictory results provided by the researchers in past studies, as there is no consensus found in results of previous research studies about the relationship between females in the boardroom and firm performance (Issa & Fang, 2019). Though, such mixed and contradictory results are not unexpected because the

relationship among board gender diversity and firm performance is both theoretically and empirically complicated (Yarram & Adapa, 2021).

Meanwhile, corporate social responsibility refers to an international private business self-regulation which is aiming towards making a contribution to accomplish societal goals of philanthropic, activities, and charitable and nature through engaging within or providing ethical support to volunteering/oriented practices (Endrikat et al., 2021). Corporate social responsibility is the foundation based on which association between stakeholders, shareholders, board, and management of a company depends. This framework is responsible in provision of a mechanism through which issues of firm's consumers, employees, management, creditors, shareholders, stakeholders, public, and society are resolved and framed. Relationships developed and sustained between external and internal stakeholders are also due to corporate social responsibility (Jarboui et al., 2020). To establish a competitive market position, it is necessary for the business firms to pay sufficient attention to corporate social responsibility. Investors are protected, and capital markets are strengthened and stabilized as a result of corporate social responsibility practices (Martínez-Ferrero et al., 2021). Better implication of corporate social responsibility practices is considered important in encouraging of economic development, enhancing the investment atmosphere, ensuring investor rights, and improving of the firm's performance (Jiang et al., 2021).

Throughout the world, corporate social responsibility has gathered significant attention in last couple of decades. Corporate social responsibility has become a trending topic of discussion for regulators and researchers due to numerous high-profile corporate scandals taken place in recent past, for example, the incident of HIH Insurance getting bankrupt in 2001. HIH Insurance was considered as an effective insurance agency has to experience problems within corporate governance and social responsibility (Martinez-Jimenez et al., 2020). Likewise, Australia's second-largest airline carrier (Ansett Australia) has failed and became bankrupt in 2001, as Australian Government ministers and media reports have explained that inefficient corporate social responsibility practices and inappropriate management has been the major reasons behind failure of Ansett Australia (Ouni et al., 2020). Similarly, Australia's fourth-largest telecommunication firm (OneTel) despite of having over 2 million customers and operations in eight countries has to face bankruptcy in 2001. Major reason behind its failure was declared as

the lack of attention paid to CSR and corporate governance (Fakir & Jusoh, 2020). Due to the collapse of such major corporations, there has been a significant negative impact over the world economy. As mentioned earlier, issues in CSR and corporate governance being the major reasons behind collapses of such corporations has initiated a debate regarding the significance of corporate social responsibility and governance in corporate world (Liu et al., 2020).

On the other hand, firm performance refers to financial efficiency of a firm through which overall cost is reduced with the help of lower input and higher output. Simply, firm performance is defined as a firm's ability of accomplishing its monetary objectives (Dani et al., 2019). From the perspective of capital market, firm performance is recognized as an important factor by the investors before making investment in any firm through purchasing its shares (Naveed et al., 2021). Firm performance is a major indicator of any firm's financial position, as investors focus highly on a firm's financial performance in last couple of years before making any investment in it. Return on assets mostly gives an indication of financial performance of a firm. However, return on assets could eventually result increasing overall financial performance. Therefore, companies pay significant attention towards improving their return on assets by keeping an appropriate balance between input (investing of resources) and output (generating sales) (Shahzad et al., 2019). Meanwhile, firm performance could be improved in numerous ways, as corporate governance and corporate social responsibility are also important factors through which firm performance could be improved (Yng & Hashim, 2019).

Corporate governance has certainly become an ongoing debate which must be looked closely for understanding this concept. For every organization, corporate governance is considered as highly important and valid (Oware & Mallikarjunappa, 2019). Corporate governance is a system which helps business management in directing and controlling the firms. In simple words, corporate governance is considered as a framework which assists in balancing the interests of numerous organizational stakeholders (Yarram & Adapa, 2021). Meanwhile, several researchers within their research studies have explained the role of corporate governance within world's emerging and developing countries (Issa & Fang, 2019). Organizations tend to face the situation in which investors show extreme interest in making investment within the organizations' stocks because of better firm performance (Pekovic & Vogt, 2021). In this era, majority of the organizations have started understanding that how significant has been firm's performance for attracting

investor to make investments in the stocks. Particularly, business firms in developed countries have become more vigilant about the corporate social responsibility and developed new CSR framework for improving financial performance and eventually strengthening investors' experience. Improvements within the CSR practices are made primarily for handling financial performance in an appropriate manner (Jarboui et al., 2020).

1.2 Broad Problem Identification

Corporate governance and corporate social responsibility are recognized as two of biggest issues for business managements, as it has been very difficult for the firms to achieve their collective goals without handling of corporate governance and corporate social responsibility in an effective manner (Endrikat et al., 2021). Lack of awareness regarding corporate governance and corporate social responsibility or failure of handling them by organizational management in an appropriate manner certainly cause problems for both management and the firm, as they have to face the critical loss both in the form of non-monetary and monetary aspects (Martínez-Ferrero et al., 2021). Corporate governance and corporate social responsibility and handling of their relevant aspects are hard for the firms all over the world in 21st century (Pekovic & Vogt, 2021). In addition, numerous researchers have explained the fact that handling of corporate governance and corporate social responsibility is very much important (like financial resources) for the business firms in order to accomplish their objectives. However, business managements have been using different strategies for effective handling of corporate governance and its relevant aspect such as board gender diversity (Ouni et al., 2020). When it comes to non-financial firms of Pakistan, there has been a lack of awareness and understanding regarding the importance of board gender diversity and corporate social responsibility and their effect on firm performance (Naveed et al., 2021).

1.2.1 Problem Statement

This study aims to investigate board gender diversity impacting firm performance with mediating role played by corporate social responsibility in non-financial firms of Pakistan.

1.3 Research Gap

Corporate governance and corporate social responsibility have been amongst the trending topics explored by the researchers in recent past (Jiang et al., 2021). In the past, several researchers in

Pakistan have performed their research work for studying various aspects of corporate governance and corporate social responsibility (Liu et al., 2020). However, there has been very limited research work performed in Pakistan to investigate the relationship of corporate governance and corporate social responsibility with firm performance (Naveed et al., 2021). In a developing country like Pakistan, very few researchers have tried to study board gender diversity, which gives an indication of the research gap available in Pakistan (Dani et al., 2019). Limited research work concerning the role of board gender diversity and corporate social responsibility towards influencing firm performance in Pakistan shows the research gap needed to be addressed (Fakir & Jusoh, 2020; Issa & Fang, 2019). Meanwhile, present research emphasizes on addressing such research gap in an appropriate manner. Hence, this study aims of assessing the relationship between board gender diversity (independent variable), corporate social responsibility (mediating variable), and firm performance (dependent variable) in non-financial firms of Pakistan.

1.4 Research Questions

Following are the research questions of this study:

1. What is the impact of board gender diversity on corporate social responsibility in non-financial firms of Pakistan during COVID-19?

2. What is the impact of board gender diversity on firm performance in non-financial firms of Pakistan during COVID-19?

3. What is the impact of corporate social responsibility on firm performance in non-financial firms of Pakistan during COVID-19?

4. Does corporate social responsibility mediates the relationship between board gender diversity and firm performance in non-financial firms of Pakistan during COVID-19?

1.5 Research Objectives

Based on the problem statement, this study aims:

- To investigate the impact of board gender diversity on corporate social responsibility in non-financial firms of Pakistan during COVID-19.

- To assess the impact of board gender diversity on firm performance in non-financial firms of Pakistan during COVID-19.
- To inspect the impact of corporate social responsibility on firm performance in non-financial firms of Pakistan during COVID-19.
- To identify the mediating effect of corporate social responsibility in relationship between board gender diversity and firm performance in non-financial firms of Pakistan during COVID-19.

1.6 Significance of the Study

This study focuses on investigating the relationship between board gender diversity, corporate social responsibility and firm performance in non-financial sector of Pakistan.

1.6.1 Theoretical Significance

This study proves very effective for research students, as it assists them towards increasing their knowledge regarding how board gender diversity helps in improving firm performance with mediating role played by corporate social responsibility. In addition, this study provides necessary assistance to the finance students in better understanding of the relationship between variables of this study (board gender diversity, corporate social responsibility, and firm performance). Furthermore, this research can contribute to financial management field in theory and operations.

1.6.2 Practical Significance

The significance of this study will be for non-financial firms desiring to acquire a sustainable competitive advantage through increased firm performance with the help of promoting board gender diversity. In addition, findings of this study clarify the relationship between board gender diversity, corporate social responsibility and firm performance, as it will provide a logical evidence for the non-financial firms regarding literature topic. Furthermore, stakeholders of Pakistani non-financial firms will be benefitted from it, as their understanding about board gender diversity and its relationship with firm performance will enhance significantly.

Chapter Summary

This chapter has covered the background of this study. It has started with the overview of board gender diversity, corporate social responsibility, firm performance, and the relationship between them. Then, this chapter has focused over analyzing the research problem related to this literature which helps in determining the problem which is to be addressed. Afterwards, this chapter has identified the research questions and objectives based on the research problem identified earlier. Further, significance of the research has been mentioned.

Chapter 2

LITERATURE REVIEW

Introduction

This chapter covers the literature review regarding board gender diversity, corporate social responsibility, firm performance, and the relationship between them. Each variable is reviewed solely before explaining their relationship with each other. Present study is focusing over provision of strong evidence regarding the relationship between board gender diversity, corporate social responsibility and firm performance. The purpose of this study is to develop an empirically viable research scheme which suggests that the constructs of board gender diversity and corporate social responsibility are significantly influencing firm performance.

2.1 Board Gender Diversity

One of the most important factors in the efficiency of board functions is board structure. The boardroom's decision-making processes are aided by the diversity of expertise, credentials, and experience of directors (e.g., human capital) (Jarboui et al., 2020). Female directors in the boardroom may help to improve the decision-making process by bringing new experiences and fresh perspectives to the board and improving the board's governance role (MartnezFerrero et al., 2021). Because board diversity improves board independence, a more varied board may be a stronger monitor of management (Adams et al. 2015). A substantial body of research examines whether gender diversity in the boardroom has an influence on corporate success. Some research demonstrate a favourable association between board gender diversity and financial outcomes (e.g., Jiang et al., 2021), while others find a negative relationship (e.g., Issa & Fang, 2019). (e.g., Dani et al., 2019). Differences in metrics, techniques, time horizons, omitted variable biases, and other contextual factors might be blamed for the uneven and unclear findings on the relationship between board gender diversity and business performance (Oware & Mallikarjunappa, 2019).

Several theories on boards have been used in previous research to investigate the link between the appointment of women to corporate boards and corporate success (Fakir & Jusoh, 2020). The most popular theories used to support the assumption that board gender diversity is connected to company success are agency, resource dependency, and human capital theories. These ideas

claim that board diversity, including gender, has an influence on the board's functions, which in turn has an impact on business performance (Martinez-Jimenez et al., 2020). First, agency theory suggests that a diverse board may strengthen the monitoring function of the board by increasing board independence. By increasing board supervision, boosting board independence, giving legitimacy, and building connections with stakeholders, the nomination of women to the board may lower agency expenses (Ouni et al., 2020). Female directors, according to Endrikat et al. (2021), provide a diverse set of talents, ideas, information, and expertise to successful monitoring. Female directors, according to empirical studies, give stronger control and monitoring of managers' conduct and activities. Female directors, according to Naveed et al. (2021), can better and more successfully oversee managers' conduct than their male counterparts. For decades, a number of famous experts have studied the relationship between gender diversity and corporate success.

A number of studies in industrialised nations have been conducted to determine the effects of gender on firm performance. The outcomes of these studies are mixed. There is no consensus or definitive judgement on whether gender diversity has a positive or negative influence on firm performance. According to Liu et al. (2020), women are more likely to work for high-performing companies. They also recorded negligible anomalous returns when a woman was appointed to the board. The data revealed that firms were responding to either internal or external requests for diversity, rather than performance-based demands for women directors. Even after adjusting for multiple business factors and causality direction, Shahzad et al. (2019) discovered that the proportion of women in senior management posts had a favorable influence on firm performance. They used a sample of 2500 Danish enterprises and discovered that the presence of females in top management has a negative to positive relationship with firm performance, and that female directors who are chosen by the workforce had a favorable influence on firm performance. Their findings reveal that the favorable benefits of women in top management are highly dependent on female top managers' credentials (Shahzad et al., 2019).

2.2 Corporate Social Responsibility

Without exertion of outside pressure, environmental issues can be effectively addressed through monitoring and self-regulation. Similarly, industry groups throughout the world have been successful in addressing of environmental issues. Companies have started focusing on increasing

the performance of corporate social responsibility along with the core business activities which ultimately results in handling of environmental issues as well as commercial promotion (Javeed & Lefen, 2019). Companies are engaging corporate social responsibility and making it as a vital part of core business activities. Performing of social responsibilities through monitoring and self-regulation by the corporation is resulting in addressing of environmental issues without any outside pressure. Every corporation before the introduction or production of a product must conduct a particular research in finding the viability and cost of the ingredients. Environment must not be ignored while producing or introducing any product by the manufacturing company (Awaysheh et al., 2020). Cost management is given major attention by the manufacturing companies during the process of production, but environment and the impact of newly introduced product over the environment is mostly ignored. For protection of environment, regulations about the ingredients of product should be made stringent (Siueia et al., 2019).

It is completely unfair to single out companies such as Unilever and Nestle which are relatively small consumers of palm oil by the environmentalists. Unilever and Nestle are actually such companies which consumer very low amount of palm oil. Environmentalists' singling out of companies such as Unilever and Nestle has been highly unfair and must be avoided (Cheung et al., 2018). Instead, environmentalists must start working on singling out those companies which are major consumers of palm oil. We as a nation have to take the responsibility and share such responsibility with each other to reduce the environmental problem. Some of the Western companies have been trying with sincerity to improve the factory safety, as they are more concerned about the employees' safety and provision of secure working conditions (Marchyta & Semuel, 2020). Contrary to that, there are some Western companies which may not focus on improving the safety of employees, as their mere focus is over the generation of maximum revenue and decreasing the overall cost. These companies are not keen enough in following the rules, regulations, ethics and standards of performing work activities, as these companies are just trying to improve factory safety as a public relations effort. In addition, companies tend to have the responsibility of monitoring the conduct of companies they have been working with either directly or indirectly. Companies are responsible for ensuring the effective conduct and work ethics of its subcontractors, contractors or suppliers (Akben-Selcuk, 2019).

Ethically, it is necessary to keep a check and balance by the clothing companies over the manufacturing of contractors or suppliers in manufacturing clothes under safe working conditions. Safe working conditions are necessary for the safety of employees working within the workplace and secure manufacturing of products (Pan et al., 2020). Corporate social responsibility has high significance related to the economic condition and its general influence on society, so it has attracted high attention of general public. Corporate social responsibility also effects economy in growth prospective, so several failures related to CSR has alerted managers around the globe about the impact of good CSR on efficiency of operations related to capital markets. Implementation of sound corporate social responsibility practices does not only reduce risk factor for the investors and improves progress of an organization but can also draw more capital investment (Pekovic & Vogt, 2021). By the introduction of CSR, economies of developed market have been fabricated steadily over numerous centuries and this all is due to the consequence of industrial capitalism's development of economy. In seventeenth century, East India Company of Dutch was the initial company which has more than one thousand investors in their share capital (Süsi & Jaakson, 2020).

While in the nineteenth century, advancement in technologies and expansion in markets, improved complication and scale of companies which made them require more capital. Consequently, evolution of different structures related to corporate social responsibility takes place which allows persuasion of fresh opportunities and resolution of economic related problems (Shu & Chiang, 2020). The concept of corporate social responsibility is new; but the business issues, it has been addressing exists from the day business activities has started taking place. After the global corporate scandals, the concept of effective corporate social responsibility has come under great debate (Foroughi et al., 2018). Corporate social responsibility is considered as highly important and valid, as several researchers have explained the role of corporate social responsibility within world's emerging and developing countries. Increase in monitoring by institutional investors, now pressurizing allocation of world standards related to corporate social responsibility in developing markets. Due to its identification that decent corporate social responsibility practices can play a major role in effecting willingness of institutional investor to spend in developing markets (Hunjra et al., 2020).

In last couple of decades, Malaysia has been such a developing country which has gone through spontaneous economic development within no time. Though, this sudden increase in economic development of the country has led to increase in environmental pollution which has become a major concern for people. To cope up with adverse conditions, government of Malaysia and regulatory authorities has developed policies which empower the existence of environmental programs. Such positive initiative taken by the regulatory authorities have been a shift from depending mainly on the activities of government to control environmental issues to institutes that must take preventive measures to work for prevention of environmental degradation proactively (Long et al., 2020). It is obvious that businesses have been the pivot source behind economic growth and financial investment as businesses prove highly significant in playing their role towards the protection of environment (Shabbir et al., 2020). With respect to the Cheung et al. (2018), government of Malaysia has taken steps to stimulate environmental initiatives by industries and businesses to proactively work towards the protection of environment. Awareness regarding to the environment has been increasing in Malaysia with the passage of time as the government has been working on preventive measures against the degradation of environment. Such measures are to facilitate the control of environmental hazards.

2.3 Firm Performance

In business firms all over the world, governance has affected the financial performance, because the management efficiency of the firms is based on the failure or success of the firm. Good practices in corporate governance increases financial performance of firm by prudent allocation and better management of resources of firm. The earning which are results of increase in performance, increase the share prices of firm significantly (Al-Ahdal et al., 2020). As Shu & Chiang (2020) has proposed that good practices related to corporate governance not only increase the share's demand but also affects the share's price of a company in positive manner by increasing it. Whereas, Awaysheh et al. (2020) has proposed that there are wide range of definitions in the literature for financial performance. For instance, both definitions present in market and in accounting are used widely in studying the relationship between financial performance of firm, corporate social responsibility and corporate governance. On the contrary, in the views of stakeholder performance of firm is regarded as the total generated wealth by firm,

before distributing it to other stakeholders instead of taking account of profit that are shareholder’s allocation (Awaysheh et al., 2020).

Literature has based the financial value on the financial performance of firm. Based on the arguments of Javeed & Lefen (2019), financial value is affected by corporate governance due to decrease in insider’s expropriation value and improving the values of cash flows that are expected, this can be distributed among investors. In the literature of corporate finance, four approaches have been identified for financial value. First approach is financial management which primarily focuses on the cash flow’s estimation and levels of investment before evaluating and identifying source of finance impact on value of firm. Second approach is capital structure which focuses on the studies of changes of capital structure impact on firm’s value and how this impact is affected either inversely or directly by different factors like firm’s equity and debt component on the capital structure of firm. Third approach is research based which considers resources of firm as base for firm’s performance. Fourth and the last approach is sustainable growth which actually summarizes first three approaches to financial value, as this approach considers financing policies, dividend policies, sources of financing, investment and financial needs, and firm’s operational performance. This approach is very sustainable for resources of firm and maximization of financial value (Marchyta & Semuel, 2020).

Awaysheh et al. (2020) has completed the identification with the capital market, and the financial performance of the company is characterized as future income, which is the normalization of the rate of return brought about by the present value of the income under the appropriate and dangerous restrictions under normal circumstances. As Akben-Selcuk (2019) believes that the data provided by the bookkeeping framework will affect the cost of the offer and show that it is accustomed to the data used by the capital business sector. Currency stability, prosperity, and financial development have some important driving forces that combine the productivity of the capital market with the certainty of financial supporters resulting from it. Therefore, the cost of stocks can be expanded by expanding the certainty of financial supporters. Profits and costs are seen as changes in the cost of the stocks and return. Nevertheless, Long et al. (2020) clarified that the company’s financial performance can be evaluated from the association’s stock price, and the company’s performance can be measured from the value of the stock. Therefore,

stakeholder's analysis allows analysts to choose to acknowledge the view of the implementation of the performance.

The return on assets (ROA) is also used worldwide to estimate the financial performance that relies on bookkeeping. As pointed out by Marchyta and Semuel (2020), the return on assets can be used as a measure to improve resource utilization, because this measure can also be used to prove to stakeholders that the association's income is earned by earning interest. The optimal use of enterprise resources can be determined according to the return on assets. According to Akben-Selcuk (2019), the return on assets shows the monetary performance of a company, but it is short-lived and can be assessed by separating the overall self-esteem from all resources. The company's resources are used, and the business is in charge of the person in charge, so it is likely to be used to measure the company's corporate governance system for the operation of the association, in order to stimulate and obtain the management effectiveness of the association. The return on assets is regarded as a monetary ratio, which indicates the level of revenue that a business element obtains through the use of its own assets (Siueia et al., 2019).

Return on equity (ROE) is another important indicator that can be used as a percentage of company's financial performance. In the research determined by company funds, the return of equity is an act based on bookkeeping. The first point of association activities is to create profits for the benefit of investors. Since then, the return on equity has been characterized by investors, and this metric is the amount of cash generated by the investor's earnings instead of cash investors (Pekovic & Vogt, 2021). ROE is considered to be the ratio of financial performance, which is determined by net income divided by shareholders' equity. Return on equity can be thought of as the net resource return, because the investor's equity is equal to the organization's resources minus its obligations. Return on equity is the most accurate measurement, as it can help business managers to successfully evaluate the benefits generated by the use of organizational resources (Shabbir et al., 2020). Return on equity is also considered to be a ratio which is determined if value and total return are both positive numbers. The calculation of the overall return is performed before the profit is delivered to the ordinary investor, after the income is delivered to the money lender and the profit is delivered to the preferred investor (Cheung et al., 2018).

The characteristic of earnings per share is the extent to which the organization's earnings are distributed to the various parts of common stock. The productivity of an organization is distinguished by earnings per share, because it has always been a key indicator of the earnings generated by the organization in a specific period of time (Javeed and Lefen, 2019). After changing the weaknesses and special circumstances of potential quotations, organizations around the world use their financial summaries to express the profit of each quotation to external partners. The equation used to calculate the profit per share has been total compensation (profits earned or earned after paying a personal assessment) divided by all available regular shares. Indeed, another improvement strategy for calculating earnings per share is to make certain changes to the denominator and numerator of the stock, which can be made through warrants, convertible debt, and options (Marchyta and Semuel, 2020). In order to calculate the profit of each department of the organization, salary schedules and accounting reports are used to find overall profit or income, from the profit paid in favor of stocks (assuming any profit) and the budget summary of the number of common shares (Akben-Selcuk, 2019).

2.4 Board Gender Diversity and Firm Performance

According to a recent research by Pekovic & Vogt (2021), a mixed-gender board can have an impact on company capital structure. They discovered that female directors are more likely than male directors to utilise short-term debt to supervise management. According to Yng & Hashim (2019), having more independent female directors on boards is connected with the likelihood of a committee for oversight and control being formed voluntarily. Female directors have better attendance records at board meetings than male directors, according to Fakir & Jusoh (2020), and are more likely to seat on monitoring-related committees like the audit and remuneration committees. According to Jarboui et al. (2020), women are more likely than males to be appointed to audit, nomination, and corporate governance committees, but they are less likely to be assigned to compensation committees. According to resource dependency theory, board diversity might boost resource provision by enhancing boards' human and social capital. Women may assist boards by providing extra resources that improve board decisions (Dani et al., 2019).

A gender-diverse board might provide a wider range of expertise, ideas, and information, resulting in increased creativity and brainstorming at company meetings (Shu & Chiang, 2020). This broad pool of resources offered by several boards produces a variety of viewpoints and

opinions, enhancing boards' ability to cope with non-routine challenges (Issa & Fang, 2019). When compared to homogenous boards, diverse boards may see different conversation patterns and more disagreement. This might result in in-depth and in-depth debates, as well as the ability to address many parts of the issues at hand at the same time, allowing for better quality judgments connected to enhancing business performance (MartnezFerrero et al., 2021). Furthermore, having a female member on a board of directors might help the company connect with significant external factors. Inclusion of female directors on boards may help a company acquire a competitive edge by allowing it to garner support from important stakeholders including suppliers, consumers, and investors, as well as access to valuable resources (Martinez-Jimenez et al., 2020). Having female directors strengthens the legitimacy of the business since it communicates that it supports gender equality and responds to social diversity standards, which is reflected in the firm's value (Oware & Mallikarjunappa, 2019).

Gender diversity on corporate boards has been explained using human capital theory. The function of a person's accumulated stockpiles of education, skills, and experience may be allocated for the advantage of an organization, according to human capital theory (Pekovic & Vogt, 2021). Women have traditionally been seen as having insufficient human capital for board roles in most countries (Pan et al., 2020). However, actual research on women's human capital refutes this claim. Jiang et al. (2021) study 100 corporate boards in the United Kingdom and discover that women are more likely to have professional credentials and foreign experience. Furthermore, new female directors are substantially more likely than their male counterparts to have experience as board members of smaller firms, but less likely to have executive experience. Ouni (2020) investigates the professional backgrounds of female and male directors in Fortune 500 businesses in the United States. They indicate that women are just as qualified as men, but boards assess resource dependency differently for women than for men. Overall, data demonstrates that men and women are equally suited for board positions, and that by recruiting both men and women, the board's performance may be improved as a consequence of varied and distinctive human capital.

Süsi and Jaakson (2020) used Tobin's Q as a performance indicator to investigate the efficacy of female senior managers. In creative businesses, there was a favorable correlation between company success and female engagement below the CEO level. Their findings revealed a

possible competitive edge in terms of identifying and developing female managing talent. Similarly, Liu et al. (2020) used panel data analysis to study Spanish enterprises and discovered that gender has a positive influence on company value and that the inverse causal link is not significant. They came to the conclusion that investors in Spain do not punish companies that expand their female board membership, and that increased gender diversity may result in economic advantages since the announcement of female directors has a favorable influence on stock price. Female directors have a considerable influence on board inputs and business results, according to Endrikat et al. (2021). Their findings revealed that gender diverse boards devote more time and effort to governance and monitoring because women are more organized and punctual than males, but this does not imply that increasing the proportion of women on boards will improve performance.

Abdallah & Ismail (2017) has shown mixed results of the impact that firm performance has due to board structure. The study has involved a large sample of 2746 listed companies from the year 1981 to 2002 to testify the impact of board structure on the firms' performance. Number of directors has been used to measure the board structure. The results have revealed that firm performance variables are negatively impacted by the board structure. The study has provided empirical evidences for the decline within the larger board structure effectiveness is due to the decision-making and communication problems. In addition, the results also explained that in large firms, there are more chances of relationship taking place within firm performance and board structure. Contrary to that, Altawalbeh (2020) has shown that there exists no association amongst Turkish firm's performance and its board structure. Danoshana & Ravivathani (2019) has shown the negative association amongst the firm value and board structure. The study has explained that financial markets show a positive reaction towards the announcement made regarding downsizing of the board. In opposite, equity value has certainly reduced due to the announcement about enhancing number of directors within the board. The results of this study are not general and cannot be applied to all companies.

Yng & Hashim (2019) that small and medium sized companies are only affected by the announcements of board structure, whereas large companies are not affected by the announcements. However, Anginer et al. (2018) has focused on finding the relationship between firms operating performance and corporate governance in the country like Sri Lanka which is not

that much stable politically and economically. 37 companies are in the list of data set from year 2003-07. Data results indicate that corporate governance implementation codes profitability of firm and performance of market increases significantly. Furthermore, Soelton et al. (2020) has shown the negative correlation amongst board structure and firm performance. Such correlation has been measured through the survey conducted over 452 large US public firms by Tobin involving the data from period 1984 to 1991. Financial and utility companies are omitted from the sample by Tobin due to government regulations adopted by BOD in those companies. The results have shown that financial ratios are positively affected by a small board. In addition, Pan et al. (2020) has shown the negative association amongst the firm value and board structure. The study has explained that financial markets show a positive reaction towards the announcement made regarding downsizing of the board.

Furthermore, Hunjra et al. (2020) has involved 879 small and medium Finnish companies for the period 1992 to 1994 and found out that there exists a negative correlation amongst board structure and firm profitability in terms of return on assets (ROA). Based on the findings of Shu & Chiang (2020), with the increase in board members, there will be an increase within the incremental costs. In case of small board, the market value will be high. In the study, the researcher has explained that companies and corporations are highly valued within capital markets through testing various independent variables. Example of such variables includes company age and diversification, presence of growth opportunities, and board composition. Such independent variables do not influence the results regarding the increase in firm performance is due to small boards for business firms. In comparison to large firms, small boards are considered as highly productive, as decrease in efficiency is measured when the board structure is higher which increases the barriers within processes and communication (Khan et al., 2020).

2.5 Corporate Social Responsibility and Firm Performance

With respect to the perceptions of several market analysts, performance of the corporate sector is completely influenced by corporate social responsibility. Contrary to that, some of market analysts perceive that corporate governance is one if not the most important aspect of business world affecting the performance of the firm. Within the corporate life cycle, the definition of corporate social responsibility varies significantly. To strengthen the foundation of a business firm, corporate social responsibility is considered as the highly significant function (Shu &

Chiang, 2020). The study of Buallay et al. (2017) has revealed that concerns regarding structural existence of modern firms are raised through conventional definition of economics. Similarly, this conventional definition is also raising concern about the working processes of firms in capturing and holding of the market. Recent trend is way beyond the qualitative growth, as it is more towards the favor of quantitative growth. However, the introduction of transnational or multinational culture within the world has the prime objective of increasing production and taking it to massive levels without considering other factors. Such introduction of transnational or multinational culture has laid foundation towards the new era which helps in studying or defining firm as an entity, and quantitative factors replacing the qualitative factors ultimately fluctuating economic as a whole and its control (Danoshana & Ravivathani, 2019).

The global financial crisis taken place in 2007-2008 has made corporate social responsibility more evident concept within the developing economies, as it has resulted in increased demands for better corporate social responsibility practices (Akben-Selcuk, 2019). Better corporate social responsibility is considered important in encouraging of economic development, enhancing the investment atmosphere, ensuring investor rights, stabilizing dividend payout, and improving of the firm's performance. Within developing countries, there is significant attention given to the corporate social responsibility, whereas there are several countries which are still lacking in having effective corporate social responsibility (Hunjra et al., 2020). The lack of attention paid corporate social responsibility has made a vital contribution towards the financial crisis. However, corporate social responsibility within developed and developing countries is given considerable attention within academic research. Integration amongst shareholders, stakeholders, and managers of an organization helps in contributing towards financial and economic stability through reinforcing economic efficiency, financial market integrity, and market confidence (Süsi & Jaakson, 2020). Corporate social responsibility is considered very important in distributing the responsibilities and rights between the numerous stakeholders of business entity including shareholders, managers, board, etc. Corporate social responsibility is also contributing in ensuring that procedures and rules are clear which are necessary in making decision concerning corporate affairs (Shu & Chiang, 2020).

Corporate social responsibility can help firms attain higher performance through an increased firm performance. Various theories have been used within developed economies for explaining

the concept of corporate social responsibility. In accordance to agency theory, corporate social responsibility is primarily for reducing conflicts amongst managers and shareholders on the basis of their interests (Süsi & Jaakson, 2020). Corporate social responsibility structures are also explained effectively by the stakeholder theory, as this theory states that awareness of business firms have certainly increased by the stakeholders instead of shareholders. The studies have shown that stakeholder theory might assist in maximizing the performance of firm and providing shared benefits to all stakeholders through focusing over the shared interests of all stakeholders (Pan et al., 2020). After the global corporate scandals, the concept of effective corporate social responsibility has come under great debate. Through corporate social responsibility, business firms have been able to define certain principles based on which business firms can be managed and facilitate the society. For the developing of competitive market, corporate social responsibility is playing a significant role. The studies have revealed that countries having effective corporate social responsibility practices tend to experience better growth and development within the corporate sectors (Hunjra et al., 2020).

2.6 Theoretical Background

This study has been supported by stakeholder theory associated with corporate social responsibility and gender diversity on board. Stakeholder theory is a mirror image of corporate social responsibility and gender diversity on board. Stakeholder theory describes individuals and groups affected as a result of firm's actions. In simple words, stakeholder theory affirms that stakeholders which are affected as a result of firm's actions are obligated or have the right of participating in decision making (Marchyta & Semuel, 2020). In addition, a stakeholder theorist begins with those living in the surrounding community who may find their environment poisoned and begins to talk about business ethics by insisting that they have a right to clean air and water. Hence, they must be considered stakeholders and their opinions must be given importance before making corporate decisions. These stakeholders might not have any stock or share, but they have a moral claim of participating within corporate decision-making (Long et al., 2020). Individuals or groups affected by company's actions have the right of participating and must be considered as shareholders (Awaysheh et al., 2020).

Agency theory has been used to explore this conflicting relationship between managers and owners (Altawalbeh, 2020). Agency theory works on the fundamental principle that the conflict

between shareholders and managers arise due to divergence between their conflicting corporate related relationships (the agents are considered to be opportunistic). There are several assumptions in the theory. Essential assumptions of the theory are: (1) managers may focus mainly on their own utility instead of increasing value of shareholder (Saidat et al., 2019); (2) when contracts are written and enforced this procedure is not costless (Danoshana & Ravivathani, 2019); (3) asymmetrical distribution of information between agents and principals; and (4) rationality of the parties is bounded or limited (Pan et al., 2020). The agency theory states that if the information is distributed asymmetrically between shareholders and managers, then there is no correct process for the principals to measure the performance of managers correctly and managers are the one who knows the in and out of every operation that firm operates on (i.e. some costs might have been incurred at shareholder's expense). This theory also considers the relationship between managers and shareholders as traditional agent to principal relationship, wherein managers has been hired by owners for running the firm in the interests which are best suited to owners and the managers get the reward in the form of salary and bonuses for the effort which they put in (Yarram & Adapa, 2021).

2.7 Theoretical Framework

This framework has one independent variable, one mediator, and one dependent variable. Board gender diversity is used as independent variable. Corporate social responsibility is used as the mediator. Firm performance is used as the dependent variable. This framework is adopted from Selvarajah et al. (2018) and Issa et al. (2019). Corporate social responsibility and firm performance are adopted from Selvarajah et al. (2018). However, board gender diversity is adopted from Issa et al. (2019).

2.8 Research Hypotheses

Following are the research hypotheses of this study:

H1: Board gender diversity has significant impact on corporate social responsibility in non-financial firms of Pakistan.

H2: Board gender diversity has significant impact on firm performance in non-financial firms of Pakistan.

H3: Corporate social responsibility has significant impact on firm performance in non-financial firms of Pakistan.

H4: Corporate social responsibility significantly mediates the relationship between board gender diversity and firm performance in non-financial firms of Pakistan.

Chapter Summary

This chapter has provided review of the relevant literature on the constructs of board gender diversity, corporate social responsibility, firm performance, and the relationship between them. Reviewing of literature is followed by the theoretical framework based on the developments in board gender diversity and corporate social responsibility underlying their influence on firm performance. The diagrammatic illustration of the theoretical framework is then presented that shows the measures of the constructs of board gender diversity and corporate social responsibility before linking them to firm performance. The hypothesized relationships between the variables are also stated alongside for empirical testing in proceeding sections of this thesis.

Chapter 3

RESEARCH METHODOLOGY

Introduction

This chapter includes methodology used for assessing the impact of board gender diversity on firm performance with mediating effect of corporate social responsibility. In this chapter, research method and techniques used for data collection and analysis are highlighted. This chapter includes details relevant to design of the study, population and sampling, data collection procedures and analysis techniques, etc. Based on the methodology used in this study, relationship between board gender diversity, corporate social responsibility, and firm performance is investigated.

3.1 Research Design

A research design is a blueprint for gathering, measuring, and interpreting data in order to reach a conclusion. Simply said, it is a strategy used by any research to gather data and analyse it in order to reach a conclusion and make suggestions based on it (Mackey & Gass, 2015). A researcher can employ a variety of approaches, including qualitative, quantitative, mixed methodology, and others. Qualitative methodology is a type of technique that focuses on assessing the subject's feelings. Quantitative methodology, on the other hand, is a sort of approach that focuses on discovering statistical differences between research variables. Mixed methodology is a sort of technique that focuses on the subject's emotions as well as statistical disparities between research variables (Kumar, 2019). Because it uses secondary data and focuses primarily on examining statistical differences across variables, the current study employs a qualitative research approach. Meanwhile, the link between board gender diversity, corporate social responsibility, and firm performance is assessed using a qualitative study technique.

3.2 Research Variables

In this study, three types of variables are used. Board gender diversity is considered as independent variable. Meanwhile, corporate social responsibility is used as mediating variable. However, firm performance is used as dependent variable, to investigate their relationship in non-financial sector of Pakistan.

3.3 Type of Study

Correlational is the type of investigation for present study, as this study focuses on assessing the correlation between board gender diversity and firm performance with mediating effect of corporate social responsibility.

3.4 Time Horizon

Present study is a longitudinal study because it involves observation of data from a population at different points in time.

3.5 Research Interference

Role of the researcher is mandatory. In present study, data is collected by the researcher through secondary sources. Calculations through statistical tests are made to identify the relationship between variables of this study. Conclusions are drawn and suggestions are made by the researcher at the end of present research.

3.6 Unit of Analysis

Unit of analysis for this study are the non-financial institutions of Pakistan.

3.7 Population

Population refers to people, events, or things associated with interest that researcher is keen on investigating. In simple terms, population refers to the intended audience (people, events, associations, etc.) that a study is interested in studying (Kumar, 2019). For this study, researcher considers non-financial institutions operating in Pakistan as targeted population area. Because it is impossible to collect data from every company in the population, the sample to be picked will reflect the whole population. To have appropriate representation of the total population, a trustworthy sample must be chosen by using an authoritative source for sample size selection (e.g. Morgan Table, Sample Size Calculator, etc.).

3.8 Sample Size

In any research, choosing a suitable sample size is critical, since no real research can be conducted without it. Morgan's Table is used for finalizing the sample of 50 non-financial institutions of Pakistan with 500 observations (50 firms x 10 quarters) is finalized to represent

entire population, as 50 non-financial institutions are finalized as sample to represent entire population. As a sample; panel data of board gender diversity, corporate social responsibility, and firm performance from the period of 2019 – 2021 (post COVID-19) is collected in order to explore the relationship between variables of the study. Data regarding board gender diversity, corporate social responsibility, and firm performance is collected by using quarterly financial statements for 50 non-financial institutions of Pakistan. In this study, data of last three years is taken because it is not possible to include more data for analysis purpose within limited span of time allotted for completion of this research.

3.9 Sampling Technique

Random sampling technique is a technique that allows the researcher to collect the data from the population on random basis (Kumar, 2019). This technique is used to collect data from the population on random basis and providing equal opportunity to each firm included in the population to be selected as sample. Because random sampling is the most basic probability sampling procedure, it is chosen. By using random sampling technique, data of previous 3 years (2019 – 2020) for 50 non-financial institutions of Pakistan regarding board gender diversity, corporate social responsibility, and firm performance is collected.

3.10 Data Collection Method

Present study has collected data from secondary data sources. As a sample; data of board gender diversity, corporate social responsibility, and firm performance for the last three years (from the period of 2019 to 2021) is collected for assessing their relationship in non-financial sector of Pakistan.

3.10.1 Data Selection

Data is selected with intense care, as data regarding the variables of this study is selected within the limited time frame available to complete data collection process in an appropriate manner. Data regarding board gender diversity, corporate social responsibility, and firm performance is selected from the period of 2019 – 2021 (post COVID-19) to identify the significant relationship between variables of the study.

3.10.2 Source of Data Collection

Data of board gender diversity, corporate social responsibility, and firm performance from the period of 2019 – 2021 (post COVID-19) is taken from the quarterly financial statements of non-financial institutions in Pakistan.

3.11 Data Analysis Techniques

Data collection is followed by data analysis (based on several statistical tests) to test the hypotheses of this study. Unbalanced data of board gender diversity (independent variable), corporate social responsibility (mediator) and firm performance (dependent variable) for ten years is balanced by taking average. Relationship between board gender diversity, corporate social responsibility, and firm performance is calculated using Strata Software on quarterly basis. Strata software is used for proceeding data analysis and identifying the extent and direction of relationship between board gender diversity (independent variable), corporate social responsibility (mediator) and firm performance (dependent variable) in non-financial sector of Pakistan.

3.12 Variables Measurement

Calculation of board gender diversity, corporate social responsibility, and firm performance is done through formulas as follows:

3.12.1 Dependent

Return on Assets = ROA = Net Income / Total Assets

This proxy is adopted from Kılıç & Kuzey (2015).

3.12.2 Independent

Board Gender Diversity = BGD = 1 - $\sum_{i=1}^{n} Pi^2$ (Blau Index)

Where, Pi is the percentage of the board members in each category and n represents the number of categories used. This proxy is adopted from Kılıç & Kuzey (2015)

Corporate Social Responsibility = CSR = Interest-influence measures can be annotation with a range of numbers (0–10)

This proxy is adopted from Selvarajah et al. (2018).

3.12.3 Control

Size = SZ = Natural of log total number of members on board

Growth Rate of Assets = GR = Percentage Increase in Assets

$$\text{Self-Finance Ratio} = SFR = \frac{\text{Retention in Business} \times 100}{\text{Increase / Decrease in Capital Employed}}$$

Tangibility = TAN = Fixed Assets / Total Assets

3.13 Analytical Model

3.13.1 Panel Data Analysis

Panel estimation technique is used for assessing the relationship between board gender diversity, corporate social responsibility, and firm performance. Panel data technique dominates time series and cross-sectional techniques. Domination of panel data is mainly due to its usefulness in terms of low co linearity amongst the variables. Panel data estimation technique is such a technique which is providing more space, as several tests of robustness could be performed. Furthermore, this technique provides generalizable results in situations where there is need of assessing relationship amongst variables. Hence, use of panel data technique is preferred in comparison to cross-sectional and time series techniques to perform an effective research.

3.13.2 Descriptive Statistics

Mean, standard deviation, minimum and maximum values are depicted through descriptive statistics and 500 observations (50 firms x 10 quarters) are studied for specific variables from 2019 – 2021 (post COVID-19).

3.13.3 Correlation

Correlation analysis refers to the statistical test which assesses the relationship between two or more variables. In correlation analysis, magnitude and direction of relationship between two or more variables is assessed. Correlation analysis range varies from -1 to +1.

3.13.4 Regression

Regression analysis refers to the statistical test which assesses the magnitude of relationship between two or more variables.

3.14 Research Model

ROA = b0 + b1*BGD + b2*CSR + b3*SZ + b4*GR + b5*SFR + b6*TAN

Where:

ROA = Return on Assets

BDG = Board Gender Diversity

CSR = Corporate Social Responsibility

SZ = Size

GR = Growth Rate of Assets

SFR = Self-Finance Ratio

TAN = Tangibility

b = beta

Chapter 4

DATA ANALYSIS AND FINDINGS

Introduction

On the basis of data collected, data analysis is done with the help of Strata Software by using statistical tests (descriptive statistics, correlation, and regression analysis).

4.1 Data Analysis

4.1.1 Descriptive Statistics

Table 1: Descriptive Statistics

	Return On Assets	Board Gender Diveristy	Corporate Social Responsibility	Size	Growth	Self-Finance Ratio	Tangibility
Mean	0.502	0.063	0.511	0.064	0.016	0.039	0.092
Median	0.176	0.015	0.141	0.052	0.003	0.031	0.076
Max	9.650	7.353	43.509	3.160	1.061	0.646	1.532
Min	0.025	0.919	5.955	0.774	0.976	0.015	0.053
Std. Dev.	0.486	0.594	0.564	0.286	0.145	0.064	0.112
Obser.	500	500	500	500	500	500	500

Descriptive statistics of all variables that are used in this study have been given above. It consists of 500 observations associated with 50 non-financial firms with the period of 3 years (2019 – 2021). In descriptive analysis, mean, median, max, min and std. dev. values are included. Starting with the variable of return on assets, it has the mean of 50.2 percent with 48.6 percent of standard deviation. This suggests that return on assets as a result of board gender diversity and

corporate social responsibility is influenced by 50.2 percent. Similarly, board gender diversity has the mean of 6.3 percent with 59.4 percent of standard deviation. This suggests that board gender diversity is influencing return on assets with the mean of 6.3 percent. Corporate social responsibility has the mean of 51.1 percent with 56.4 percent of standard deviation. This suggests that corporate social responsibility is influencing return on assets with the mean of 51.1 percent.

However, size has the mean of 6.4 percent with 28.6 percent of standard deviation. This suggests that size is influencing return on assets with the mean of 28.6 percent. Furthermore, growth has the mean of 1.7 percent with 14.5 percent of standard deviation. This suggests that growth is influencing return on assets with the mean of 1.7 percent. Similarly, self-finance ratio has the mean of 3.9 percent with 6.4 percent of standard deviation. This suggests that self-finance ratio is influencing return on assets with the mean of 3.9 percent. In addition, tangibility has the mean of 9.2 percent with 11.2 percent of standard deviation. This suggests that tangibility is influencing return on assets with the mean of 9.2 percent. The highest mean value of corporate social responsibility (51.1 percent) shows that corporate social responsibility is such an aspect which is having the highest influence over return on assets. Self-finance ratio has the lowest influence on return on assets due to its lowest mean value 3.9 percent.

4.1.2 Correlation Analysis

The term "correlation" refers to determining the link between two or more variables. When there is a significant association between two or more variables, correlation is considered high. When there is a weak association between two or more variables, however, correlation is considered low. Meanwhile, moderate correlation is defined as a moderate strength of association between two or more variables. The range of correlation coefficients is -1 to +1. Pearson r is used to examine the connection between the study's variables.

Table 2: Correlation Analysis

	Board Gender Diversity	Corporate Social Responsibility	Size	Growth	Self-Finance Ratio	Tangibility
Board Gender Diveristy	1.000					
Corporate Social Responsibility	0.089	1.000				
Size	0.051	0.062	1.000			
Growth	0.008	0.021	0.033	1.000		
Self-Finance Ratio	0.336	0.053	0.080	0.058	1.000	
Tangibility	0.077	0.006	0.021	0.032	0.003	1.000
ROA	0.178	0.361	0.319	0.212	0.179	0.114

The results show that there is a weakly significant association between board gender diversity and return on assets with a magnitude of .178 and in a positive direction. Corporate social responsibility and return on assets have a moderately significant association with a magnitude of .362 and in a positive direction. Similarly, there is a moderately significant association between size and return on assets with a magnitude of .320 and in a positive direction. Growth has a weakly significant relationship with a magnitude of .213 and in a positive direction. Self-finance ratio and return on assets have a weakly significant association with a magnitude of .180 and in a positive direction. Furthermore, there is a weakly significant association between tangibility and return on assets with a magnitude of .115 and in a positive direction.

4.1.3 Regression Analysis

4.1.3.1 Impact of Board Gender Diversity and Corporate Social Responsibility on Financial Performance in Non-Financial Firms of Pakistan

A link between dependent and independent variables, as well as the magnitude of that relationship, is referred to as regression.

Table 3: Regression Analysis

Variable	Obs	Coefficient	Std. Error	t-statistic	Prob.
Board Gender Diversity	500	0.152	0.062	2.447	0.0152
Corporate Social Responsibility	500	1.280	0.524	2.439	0.0155
Size	500	0.075	0.110	2.680	0.0196
Growth	500	0.365	0.292	3.249	0.0329
Self-Finance Ratio	500	0.013	0.017	2.998	0.0255
Tangibility	500	1.791	0.544	2.288	0.0012
Effects Specification					
R-squared		0.742	Mean dependent var		1.571
Adjusted R-squared		0.672	S.D. dependent var		1.486
S.E. of regression		0.850	Akaike info criterion		2.701
Sum squared resid		153.284	Schwarz criterion		3.474
Log likelihood		-306.685	Hannan-Quinn criter.		3.011
F-statistic		10.706	Durbin-Watson stat		1.948
Prob (F-statistic)		0.000			

a) Predictors (Constant): Board Gender Diversity, Corporate Social Responsibility, Size, Growth, Self-Finance Ratio, Tangibility

b) Dependent Variable: Return on Assets

Regression analysis shows that p value of board gender diversity is 0.0152 which is less than 0.05 indicating that board gender diversity significantly affects return on assets. Similarly, p

value of corporate social responsibility is 0.0155 which is less than 0.05 indicating that corporate social responsibility affects return on assets. Whereas, p value of size is 0.0196 which is less than 0.05 indicating that size affects return on assets. However, p value of growth is 0.0329 which is less than 0.05 indicating that growth affects return on assets. In addition, p value of self-finance ratio is 0.0255 which is less than 0.05 indicating that self-finance ratio affects return on assets. Whereas, p value of tangibility is 0.0012 which is less than 0.05 indicating that tangibility affects return on assets.

4.1.3.2 Impact of Board Gender Diversity on Corporate Social Responsibility in Non-Financial Firms of Pakistan

Table 4: Regression Analysis

Variable	Obs	Coefficient	Std. Error	t-statistic	Prob.
Board Gender Diversity	500	1.210	0.067	2.961	0.0021
Size	500	0.123	0.017	2.115	0.0412
Growth	500	0.132	0.023	2.490	0.0383
Self-Finance Ratio	500	0.106	0.028	2.437	0.0153
Tangibility	500	0.013	0.034	2.173	0.0386
Effects Specification					
R-squared		0.721	Mean dependent var		1.376
Adjusted R-squared		0.650	S.D. dependent var		1.448
S.E. of regression		0.831	Akaike info criterion		2.671
Sum squared resid		150.022	Schwarz criterion		3.451
Log likelihood		-302.639	Hannan-Quinn criter.		2.071
F-statistic		9.661	Durbin-Watson stat		1.872
Prob (F-statistic)		0.000			

a) Predictors (Constant): Board Gender Diversity, Size, Growth, Self-Finance Ratio, Tangibility

b) Dependent Variable: Corporate Social Responsibility

Regression analysis shows that p value of board gender diversity is 0.0021 which is less than 0.05 indicating that board gender diversity significantly affects corporate social responsibility. Similarly, p value of size is 0.0412 which is less than 0.05 indicating that size affects corporate social responsibility. Whereas, p value of growth is 0.0383 which is less than 0.05 indicating that growth affects corporate social responsibility. However, p value of self-finance ratio is 0.0153 which is less than 0.05 indicating that self-finance ratio affects corporate social responsibility. In addition, p value of tangibility is 0.0386 which is less than 0.05 indicating that tangibility affects corporate social responsibility.

4.1.4 Mediation Analysis

Table 5: Mediation Analysis

H4: Corporate social responsibility significantly mediates the relationship between board gender diversity and firm performance in non-financial firms of Pakistan.

	Effect	**SE**	**t-value**	**P**
Direct Effect of Board Gender Diversity on Firm Performance	.596	.052	2.202	.000
Indirect Effect of Board Gender Diversity on Firm Performance	.695	.042	2.361	.000

Mediation analysis reveals that board gender diversity is a significant predictor of corporate social responsibility, B=.695, SE=.042, $p<0.05$. Board gender diversity is no longer a significant predictor of financial performance, after controlling for the corporate social responsibility, B = .596, S.E =.052, $p<0.05$, hence partial mediation exists. For indirect effect, the value of R is 0.695, which means mediating variable has an influence on relationship by 0.695 units (R2 = 0.695). The indirect effects have found to be significant, B=0.695, SE=0.42, $p<0.05$. This tells that corporate social responsibility has a mediating effect on relationship between board gender diversity and financial performance by 0.695%.

4.2 Data Findings

Hypothesis 1 'Board gender diversity has significant impact on corporate social responsibility in non-financial firms of Pakistan' is proved in regression analysis. In regression analysis, it is proved that there exists a significant relationship between board gender diversity and return on assets in non-financial firms of Pakistan, which accepts H_1. Issa & Fang (2019) also shows the significant relationship between board gender diversity and corporate social responsibility. The significant relationship between board gender diversity and corporate social responsibility explains that board gender diversity is responsible for influencing corporate social responsibility.

Hypothesis 2 'Board gender diversity has significant impact on firm performance in non-financial firms of Pakistan' is proved in regression analysis. In regression analysis, it is proved that there exists a significant relationship between board gender diversity and return on assets in non-financial firms of Pakistan, which accepts H_2. Jiang et al. (2021) also shows the significant relationship between board gender diversity and return on assets. The significant relationship between board gender diversity and return on assets explains that board gender diversity of the firm is responsible for influencing financial performance.

Hypothesis 3 'Corporate social responsibility has significant impact on firm performance in non-financial firms of Pakistan' is proved in regression analysis. In regression analysis, it is proved that there exists a significant relationship between corporate social responsibility and return on assets in non-financial firms of Pakistan, which accepts H_3. Akben-Selcuk (2019) also shows the significant relationship between corporate social responsibility and return on assets. The significant relationship between corporate social responsibility and return on assets explains that corporate social responsibility of the firm is responsible for influencing financial performance.

Hypothesis 4 'Corporate social responsibility significantly mediates the relationship between board gender diversity and firm performance in non-financial firms of Pakistan' is proved in mediation analysis. In mediation analysis, it is proved that there exists a significant mediating effect of corporate social responsibility in relationship between board gender diversity and return on assets in non-financial firms of Pakistan, which accepts H_4. The significant mediating effect of corporate social responsibility shows that change in corporate social responsibility brings a definite change in relationship between board gender diversity and financial performance.

Table 6: Summary of Data Findings

Hypothesis	Statement	Accepted/Rejected
H1	Board gender diversity has significant impact on corporate social responsibility in non-financial firms of Pakistan.	Accepted
H2	Board gender diversity has significant impact on firm performance in non-financial firms of Pakistan.	Accepted
H3	Corporate social responsibility has significant impact on firm performance in non-financial firms of Pakistan.	Accepted
H4	Corporate social responsibility significantly mediates the relationship between board gender diversity and firm performance in non-financial firms of Pakistan.	Accepted

Chapter 5

CONCLUSION AND RECOMMENDATIONS

5.1 Discussion

This study has focused on investigating the relationship between board gender diversity, corporate social responsibility, and financial performance in non-financial firms of Pakistan. In this study, board gender diversity is considered as independent variable. Financial performance (represented by return on assets is considered as the dependent variable. Corporate social responsibility is used as the mediator. Size, growth rate, self-finance ratio, and tangibility are used as control variables. In addition, non-financial firms of Pakistan are chosen for investigating the relationship between variables mentioned above. To explore the relationship, data regarding variables of this study is collected from annual financial statements of 50 non-financial firms in Pakistan from the period of 2019 – 2021 (10 quarters). To test the acceptance and rejection of hypotheses of this study, a scale of significance level having the range allowed till 5% is set. Hypotheses of the study (H_1, H_2, and H_3) are accepted or rejected on the basis of scale of significance level set. As significance level of board gender diversity and corporate social responsibility for financial performance is less than 0.05. So, H_2 and H_3 are accepted and proved significant. In addition, significance level of board gender diversity for corporate social responsibility is less than 0.05. So, H_1 is accepted and proved significant. Therefore, it is proved that board gender diversity and corporate social responsibility impacts financial performance and board gender diversity impacts corporate social responsibility in non-financial firms of Pakistan. Mediation analysis has proved the significant mediating effect of corporate social responsibility in relationship between board gender diversity and financial performance in non-financial firms of Pakistan.

5.2 Conclusion

This study has the prime aim of identifying the impact of board gender diversity on financial performance with mediating effect of corporate social responsibility in non-financial firms of Pakistan. To collect data, secondary source (financial statements of non-financial firms) is used. For analysis purpose, descriptive statistics, correlation, regression, and mediation analysis are used to find the relationship between board gender diversity (independent variable), corporate

social responsibility (mediator), and financial performance (dependent variable). To testify the relationship between variables, board gender diversity and corporate social responsibility are empirically tested with return on assets and found positive correlation between them. In addition, board gender diversity is empirically tested with corporate social responsibility and found positive correlation between them. Regression analysis has revealed a significant relationship between board gender diversity, corporate social responsibility, and financial performance. Based on the findings of correlation and regression analysis, it is concluded that board gender diversity and corporate social responsibility impacts financial performance in non-financial firms of Pakistan. In addition, findings have proved that board gender diversity significantly impacts corporate social responsibility in non-financial firms of Pakistan. Finally, mediation analysis has proved the mediating effect of corporate social responsibility in relationship between board gender diversity and financial performance in non-financial firms of Pakistan. Mediation analysis reveals that change in corporate social responsibility tends to bring a definite change in relationship between board gender diversity and financial performance in non-financial firms of Pakistan.

5.3 Research Limitations

The term "limitation" refers to a restriction that a researcher encounters when conducting research. The researcher encounters just a few restrictions in this study, such as a limited time period, limited sample size, etc., while exploring the correlation among board gender diversity, corporate social responsibility, and financial performance in non-financial firms of Pakistan. The time range available for doing this study is extremely limited, since more time is required to accomplish this research than is accessible. If additional time is available, a more extensive study with involving data from other non-financial firms might be conducted. However, the researcher should be given more time to collect data from non-financial sector of Pakistan. As a result of additional time, the researcher will benefit in terms of collecting data by incorporating non-financial firms who were not considered in present study due to the restricted time available for data collection. Additionally, sample size is another constraint. A sample of 50 firms to represent entire non-financial sector of Pakistan is insufficient. For performing a complete research with greater representation of non-financial sector of Pakistan, the sample size might be increased to 70 non-financial firms or more. Finally, most of scholars and researchers have performed panel

data research and neglected to perform time-series data research on this literature topic, which is another limitation.

5.4 Recommendations & Future Research

This study has addressed majority of the aspects, yet minor improvements might be done to make it even more effective and reliable. Minor improvements to the time period, sector, sample size, research nature, etc., can be made. The time duration might be extended in order to help the researcher in performing a suitable research. A suitable time period provided to the researcher may aid in the collection of data from firms operating in diverse conditions and cultures. Extended time period could give an option to the researcher to collect data from non-financial firms (who are not included in the study) during collection process. Involving additional non-financial firms in data collection process will help in expanding the sample size, which will improve the validity and reliability of the data collected and analyzed. Furthermore, this study has focused on the non-financial sector of Pakistan, although any sector of Pakistan (other than non-financial sector of Pakistan) might be utilized to collect data and analyze relationship between variables of the study. Furthermore, if the researcher is given a longer time period to complete a research study, the sample size can be expanded. Finally, rather than doing panel data research, time-series data research might be used to analyze the correlation between variables of the study.

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