PROJECT REPORT

ON

The Effect of CSR on Firm Performance: Evidence from Pharmaceutical and Chemical Industries of Bangladesh

Submitted to

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14th July, 2024

Dr. Mohammad Tariq Hasan

Associate Professor

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Subject: Project report on "The Effect of CSR on Firm Performance: Evidence from Pharmaceutical and Chemical Industries of Bangladesh"

Dear Sir,

You will be delighted to know that I have completed my report titled "The Effect of CSR on Firm Performance (Evidence from Pharmaceutical and Chemical Industries of Bangladesh)". The objective of this report is to find the relation between CSR and Firm Performance. The report is conducted based on extensive research on the pharmaceutical and chemical industries of Bangladesh. The report provides and in-depth analysis and finding and draws conclusion on the relation between CSR and Firm Performance in the pharmaceutical and chemical sector of Bangladesh. I trust that this report will be valuable to researchers, representatives, and investors who are interested in the topic of CSR and its effect on firm performance.

I would like to express my gratitude to you for your guidance and support throughout the duration of this project. I am open to any feedback and recommendations you might have for me. Thank you for considering my submission.

Sincerely,

Rafi Fardin Yousuf

Id: 111202022

Declaration of the student

I, Rafi Fardin Yousuf, student of School of Business and Economics department of United International University, major in accounting. Hereby declare that I have finished the project report on "The Effect of CSR on Firm Performance: Evidence from Pharmaceutical and Chemical Industries of Bangladesh".

I also state that this report has been solely prepared by me and for my educational requirement of my BBA degree and it has not been previously published anywhere else for any purpose.

Rafi Fardin Yousuf

ID: 111202022

Acknowledgement

Firstly, I would like to show my gratitude to the Almighty Allah who kept me in good health and gave me the strength and capability to complete this project successfully. Then I would like to thank my honorable supervisor "Dr. Mohammad Tariq Hasan, Associate Professor, School of Business & Economics, United International University" who helped me with his knowledge and skill to complete this project by providing the proper guidance and suggestions. Otherwise, it would have been very difficult for me to complete this project report properly.

Once again thank you very much, sir, for your contributions, support and guidance to make this project a success.

Sincerely,

Rafi Fardin Yousuf

ID: 111202022

Abstract

Corporate Social Responsibility (CSR) has become an important part of business strategy globally, with increasing recognition of its potential impacts on firm performance. This study displays the relationship between CSR and firm performance in the pharmaceutical and chemical industries in Bangladesh. By applying the secondary data from annual reports of 28 companies listed in Dhaka Stock Exchange (DSE) over a seven-year period (2016/17-2022/23), this study applies Tobin's Q to measure firm performance. The findings display a positive relation between CSR activities that is measured by expenditures on Workers Participation Provision Fund (WPPF) and Welfare Fund (WF) and firm performance is measured by indicators such as market value and total assets. Companies that give importance to CSR not only achieve financial gains but also can contribute to strong relationship with stakeholders. This paper contributes experimental evidence by supporting the benefits of CSR in increasing financial performance within the pharmaceutical and chemical industry. This research is relevant for the stakeholders who are willing to put more effort on sustainable business practices to increase the economic growth in Bangladesh.

Keywords: Corporate social responsibility, firm performance, pharmaceutical and chemical industries, Dhaka stock exchange, Bangladesh.

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List of Abbreviation

CSR: Corporate Social Responsibility

DSE: Dhaka Stock Exchange

NIBT: Net Income Before Tax

AQ: Audit Quality

FP: Firm Performance

ROA: Return on Assets

US: United States

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

This paper demonstrates the effect of Corporate Social Responsibility (CSR) on firm performance. Corporate social responsibility (CSR) has received increasing concerns from companies, the public, and academia (Minghui, July, 2018). It has emerged as an important approach and framework for addressing the role of business in society, setting standards of behavior to which a company must follow to impact society in a positive and an effective way at the same time as abiding by values that exclude profit seeking at any cost (Mohamed A. K. Basuony, 2014). CSR is concerned with corporate stakeholders who are directly or indirectly affected by company's operations. Corporate Social Responsibility commonly refers to the strategies applied by organizations to conduct their business in a way that is ethical, society friendly and valuable for the society in terms of development (Mohamed A. K. Basuony, 2014). CSR has been considered as a key factor in accomplishing economic goals and wealth maximization (Rahman, 3 December, 2015). CSR represents corporate actions that improve society's welfare above and beyond the company's benefits and legal responsibilities. It is when a company operates keeping its social responsibility, voluntary obligations for workers, suppliers, customers, local communities and the environment, into account (Mostafa, 2021). CSR has been considered as a key factor in achieving economic goals and wealth maximization. CSR practices are usually measured based on two aspects: process and performance. In business practice, CSR becomes an important issue for corporate decision-making, and increasing numbers of multinationals have developed specialized segments to plan, conduct, and manage their CSR activities. CSR practices can impact customer satisfaction, employee satisfaction, stronger brand equity and favorable attitudes towards firms (Mohamed A. K. Basuony, 2014). CSR describes a firm's obligation to protect and improve social welfare now as well as in the future, by generating sustainable benefits for stakeholders (Mohamed A. K. Basuony, 2014). In business CSR is an important issue for decision making, conduct business operations, and managing CSR activities. CSR ensures the wellbeing of the stakeholders of the business as well as ensures less harm to the environment. It encourages businesses to take part to improve the environment and become socially responsible. This paper therefore aims to investigate the relation between CSR and firm performance from the evidence of pharmaceutical and chemical industries of Bangladesh.

1.2 Problem Statement

Nowadays CSR is one of the important factors in business. CSR has been studied for decades, with interest greatly increasing in the last decade in both scholarship and practice (Adamu, 2017). However, the concept is novice for Bangladesh, the developed countries such as Europe and American country have been practicing many years ago (Mostafa, 2021). Failure to properly practice CSR activities may result in reputational damage of the company. It can lead to negative publicity and word of mouth. This can result in loss of customer satisfaction and trust and also investors, suppliers, employees and other stakeholders may lose trust from the company. Company's financial performance may decrease due to the lack of consumers. Ownership Structure may also impact on the firm performance. The issue of ownership structure has been addressed by a number of researchers, particularly in developed countries such as the United Kingdom (UK), the United States (US) and Europe, for the last two decades (Abdulkader Omer Abdulsamad, 2016).

Many people suggested that businesses owe a decent responsibility towards the society to make peoples life easier with their operations and with the help of CSR. Accordingly, when businesses abandon their Corporate Social Responsibility, they do not properly help the society and its people also does not accomplish their moral duty towards the society. These problems could be mitigated by applying more and more sustainability and CSR. With the help of Corporate Social Responsibility, a great number of sustainable processes and developments could be done so CSR is a major part to keep the environment green and more sustainable. CSR initiatives may contribute to the long-term sustainability and growth of the company which ultimately spreads goodwill and sustainable growth of the company. CSR activities may help to recover these situations by promoting positive image of the company. Less practice of CSR activities can build some risks such as resource reduction, problem in supply chain, accidents and poor labor practices that may interrupt the production process that would increase cost and damage the assets of company.

1.3 Research Questions

The research question of this study is:

1) Does CSR have effect on firm performance in Pharmaceutical and Chemical industries in Bangladesh?

1.4 Research objectives

This report is conducted to study the relation between Corporate Social Responsibility on firm performance. To see how firm's balance between their social responsibility and firm financial performance. To explore how businesses focuses on aspects like economical, legal, ethical expectations from the society. The primary objective of this report is to analyze the effect of CSR on the performance of Pharmaceuticals and Chemical industries in Bangladesh. In business practice, CSR becomes an important issue for corporate decision-making, and increasing numbers of multinationals have developed specialized segments to plan, conduct, and manage their CSR activities (Minghui, July, 2018). Many researchers have been trying to figure out if companies that have combined CSR in their business policy to perform better financially than companies that have not integrated. This study attempts to accomplish many goals such as:

1) To observe the relation between CSR and firm performance of Pharmaceutical and Chemical industries.

1.5 Motivation of the Study

Studying Corporate Social Responsibility (CSR), and its influence on firm performance is important for understanding how businesses can flourish while also benefiting society and environment. By discovering this relation this research can contribute to enhance the sustainability and efficiency of organizations. It also enlightens policymakers and stakeholders about the importance of participating in social and environmental initiatives. Studying the impact of these three factors on firm's performance also provides many valuable knowledge for investors which helps to make decision that promote sustainable and ethical business practices. Both the Pharmaceutical and Chemical industries have considerable impacts on public health and the environment. CSR activities can improve a company's reputation and brand image that leads to increased consumer trust and loyalty. If a consumer believes that other people are of the view that the company behind a brand is known for its CSR, that consumer may feel more secure in acquiring and using the company's products or services (Rahman, 3 December, 2015). So, by studying these factors we can see how a firm performs according to these aspects.

1.6 Scope and limitations of the Study

From the study it is seen that CSR creates sustainable competitive advantage for businesses, increased image & trust, customer satisfaction and consequently better firm performance. However, CSR helps to improve the company's financial performance because of increased reputation of the firm. Companies should engage in long-term

planning about their CSR activities and continuously commit resources to CSR practices, so that CSR can help improve their financial profitability, access to medicines, human health, and society. This study can evaluate different scopes of CSR such as environmental sustainability, community engagement, employee welfare and to understand the effects on firm performance. Researchers may compare the CSR practices and performance of firms within the pharmaceutical and chemical industries and other sectors to provide further insights.

There is limited availability of the CSR data that may constrain the analysis to the findings. Building a casual relation between CSR and firm performance can be challenging. The Pharmaceutical & Chemical industries are complex with many diverse sub-sectors and regulatory environments. This complexity may make it more difficult to simplify findings across the entire industry. Different stakeholders may have different viewpoints and thoughts on CSR practices this makes the availability of CSR data more limited. It's hard to find the enough amount of information about CSR activities and firm's performance for most of the companies in the industry. It's complicated to say that CSR activities directly lead to better firm performance because there are many other factors that influences how well a company performs. Also, the Pharmaceutical and Chemical industries are so different from each other and its very tough to simplify the findings of most of the companies.

1.7 Definition of key terms

CSR: Corporate Social Responsibility (CSR) is a business model that shows a company's commitment to operate in a socially, economically and environmentally sustainable manner.

Stakeholder: Stakeholders are the individuals and groups of a business who have an impact on themselves if a business takes any decision or makes any changes.

Competitive Advantage: It refers to the unique capabilities that enable a company to outperform its competitors.

Corporate Activities: Corporate activities are some of the different types of actions that businesses take to achieve its objectives.

Industry Analysis: An industry analysis is the examination of different factors that affect the performance and competitiveness of a specific industry.

CHAPTER TWO: LITERATURE REVIEW

2.1 Theory

Corporate social responsibility generally refers to the strategies implemented by corporations to conduct their business in a way that is ethical, society friendly and beneficial to the community in terms of development (Mohamed A. K. Basuony, 2014). Corporate social responsibility is viewed as an organization's commitment to make the most of its positive impact on stakeholders while minimizing its negative impact on the society (Mohamed A. K. Basuony, 2014). CSR describes a firm's obligation to protect and improve social welfare now as well as in the future, by generating sustainable benefits for stakeholders. CSR has been considered as a key factor in accomplishing economic goals and wealth maximization. In Bangladesh the Pharmaceutical and Chemical industry are playing an important role and it is an interesting aspect to study on these industries and factors. By practicing the Corporate Social Responsibility, a firm can develop and sort out environmental, social and economic problems. Corporate Social Responsibility helps organizations to achieve higher goals of business responsibility towards the society, environment, employees, stakeholders and more. So, Corporate Social Responsibility stands as an encouragement guiding industries towards economic growth, environmental sustainability, stakeholders' satisfaction and social well-being by taking a thoughtful approach to do business responsibly in this vast connected world.

2.2 Industry analysis

The Pharmaceutical and Chemical industries in Bangladesh have shown a significant amount of growth over the past few decades. These are the most technologically advanced sectors in Bangladesh. Bangladeshi Pharmaceutical industries are mainly dominated by domestic manufacturers. Of the total pharmaceutical market of Bangladesh, the local companies are enjoying a market share reaching around 97%, while the MNCs are having a poor market share. The Pharmaceutical industry is one of the fastest growing sectors in Bangladesh and its growth reached at peak during crisis like Covid 19. By serving the domestic market the pharmaceutical industries are also exporting pharmaceutical products in many different countries including regulated markets like USA and Europe. The Pharmaceutical industries in Bangladesh are also known for making important drugs at a competitive price. Despite the growth the pharmaceutical industry is facing many challenges like quality control, agreement with international standards, intellectual property rights etc. However, there are a great number of opportunities for further growth in this industry including expanding the industry into new export markets, investing in research and development to develop new drugs and enhancing manufacture capabilities.

The Chemical industry in Bangladesh is diverse because Bangladesh has many sub-sectors of Chemicals such as: basic chemicals, special chemicals, agrochemicals, petrochemicals and many more. Bangladesh strongly relies on the import for many chemical products. This shows both the challenges and opportunities for the domestic chemical manufacturers to meet the local demand. With the development of industries such as textiles, agriculture and pharmaceuticals the demand for chemical is increasing day by day. The chemical industry also faces some challenges like environment pollution and safety concerns. These issues should be addressed by implementing strict regulations and adoption of cleaner production technologies. Investment in infrastructure and technology is a crucial part for the growth in chemical industries. Also, improvements in logistics, transportation and supply of the energy can help to reduce production costs and progress competitiveness. The trend in both of the industries is positive with consistent improvement and growth which includes increasing healthcare needs domestically and globally, advancements in technology and manufacturing processes and growing investments in research and development. Bangladesh's strategic and geographical location and cost-effective manufacturing abilities have helped these industries to become more competitive. The pharmaceutical industry in Bangladesh have gained an important level of maturity. Established companies are producing high quality drugs and growing their market. However, there is still room for further expansion and innovation. The industry is continuously investing in research and development to develop new and improved drugs and medicines. On the other hand, the chemical industry is still under the phase of development. The chemical companies are focusing on increasing their product ranges by improving the manufacturing process and improving the quality standards to compete in the international market.

2.3 Literature survey

This paper aims to show the relation between Corporate Social Responsibility (CSR), on firm performance in the Pharmaceutical & Chemical industry of Bangladesh. Corporate social responsibility defines the ability of a company to be socially responsible to the growth and development of the environment in which it operates. It defines the voluntary services given by a company to the society. The effect is the increased in purchasing behavior and good brand image the company will have in the society. Over the last few decades, many scholars have paid substantial effort to CSR (Rahman, 3 December, 2015). Therefore, it has become an important concept in and management literature (Rahman, 3 December, 2015). A good record of CSR creates a positive image that optimistically enhances consumers' evaluations of the firm and their attitude toward it

(Rahman, 3 December, 2015). Managers believe that CSR is not simply doing good things, but also helping companies bring about long-term competitive advantages (Minghui, July, 2018). Therefore, this review shows the complex relationship between Corporate Social Responsibility (CSR), and performance of the firms in the Pharmaceutical & Chemical industry of Bangladesh. While some viewpoint suggests that a trade-off between social responsibility and financial performance, others argue for the possible benefits of CSR in terms of brand image and employee self-esteem.

2.4 Hypothesis development

Over the last few decades, many scholars have paid substantial effort to CSR. Therefore, it has become an important concept in and management literature (Rahman, 3 December, 2015). CSR is a commitment of business to contribute to sustainable economic development, working with employees, their families, the local community and society at large to improve their quality-of-life contempt (Mostafa, 2021). CSR refers to open and transparent business practices that are based on ethical values and respect for the community, employees, the environment, shareholders and other stakeholders (Mostafa, 2021). Many research has directed to measure the relation between CSR on firm performance. Widespread research has been led to assess the empirical association and relation between CSR and firm financial performance and some of the researchers have provided that a positive relationship between CSR and corporate financial performance (Mohamed A. K. Basuony, 2014). In the pharmaceutical and chemical industries of Bangladesh, firm's that actively participate in Corporate Social Responsibility (CSR) initiatives experiences a significant amount of improvement in firm performance. Including but not limited to profitability, market share, stock performance and many more compared to the firms with limited or no CSR engagement in their business operations. Accordingly, the study hypothesizes that,

H1: There is positive relationship between Corporate Social Responsibility and firm performance.

CHAPTER THREE: RESEARCH METHODOLGY

3.1 Theoretical Framework

The study is completely based on secondary and publicly available data. The mathematical and statistical calculation have been conducted to design this study since the objective of the paper is to examine the relation between CSR and firm performance. The dependent, independent and control variables have been measured for hypotheses testing. Based on the objective of our study CSR has been taken as the independent variable and firm performance has been taken as the dependent variable. From CSR the "CSR expenditure" has been taken & from firm performance NIBT (net income before tax) & TobinsQ measurement has been taken for the study to measure the impact of CSR on firm performance. Also, the control variables such as ROA, Firm Size, Growth Rate, Leverage, & Audit Quality has been measured to find the impact. The objective is to investigate whether the variables are explained by the collected data.

Corporate Social Responsibility (CSR)	→	Firm Performance (Pharmaceutical & Chemical) • NIBT • Tobin's Q
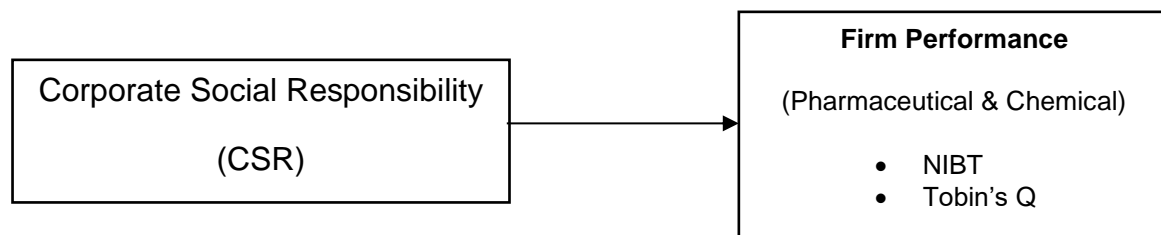
Figure 1 Study Framework

3.2 Data collection

This study is conducted based on research approach. A complete secondary data has been used for this project by gathering data from various research papers and academic resources related to Corporate Social Responsibility between firms etc. A sample collection of annual reports of pharmaceutical and chemical firms has been taken as a sample to design this study to observe the impact of CSR on firm performance. The hypothesis is constructed based on the main aspects of this paper. Based on the research there is hardly any pharmaceutical and chemical company that can operate without sustainable procedures and CSR activities.

3.3 Sample selection

Table 1: List of Sample Companies

SL NO.	Name of the Listed Companies	Listed Year
1	ACI Limited	1976
2	ACI Formulations Limited	2008
3	ACME Laboratories Limited	2016
4	Active Fine Chemicals Limited	2010
5	Advent Pharma Limited	2018
6	AFC Agro Biotech Ltd.	2014
7	Ambee Pharmaceuticals PLC	1986
8	Beacon Pharmaceuticals PLC	2010
9	Beximco Pharmaceuticals Ltd.	1986
10	Central Pharmaceuticals Limited	2013
11	Far Chemical Industries Limited	2014
12	Global Heavy Chemicals Limited	2013
13	The IBN SINA Pharmaceutical Industry PLC	1989
14	Indo-Bangla Pharmaceuticals Limited	2018
15	JMI Syringes & Medical Devices Ltd.	2013
16	Keya Cosmetics Ltd.	2001
17	Kohinoor Chemicals Company (Bangladesh) Ltd.	1988
18	Libra Infusions Limited	1994
19	Marico Bangladesh Limited	2009
20	Orion Infusion Ltd.	1994
21	Orion Pharma Ltd.	2013
22	Pharma Aids	1987
23	Reckitt Benckiser (Bangladesh) PLC	1987
24	Renata PLC	1979
25	Salvo Chemical Industry Limited	2011
26	Silva Pharmaceuticals Limited	2018
27	Square Pharmaceuticals PLC.	1995
28	Wata Chemicals Limited	1992

For this research the data of annual reports of pharmaceutical and chemical firms has been taken as a sample to design this study to perceive the effect of CSR on firm performance. For the purpose of the study the pharmaceutical and chemical companies listed in Dhaka Stock Exchange (DSE) were selected. Currently there are 33 listed companies in the pharmaceutical and chemical sector in DSE. However, some companies had some problems and were not available as secondary data. So, a sample of 28 Pharmaceutical and Chemical industry from DSE has been taken and analyzed properly for this paper. The data has been collected from the annual report of the company, from 2017-2018 to 2022-2023 i.e., 6 years. Some sections have been financial

statements to get the exact data. From the data the independent and dependent variables and their absolute and relative values are calculated for further statistical and hypothesis calculation. Also, the Tobin's Q measurement has been applied for the test. These samples are selected for the measurement of the paper and to analyze the effects and impacts of the topic.

3.4 Variable Definition and Measurement

Table 02: Variable Definition and Explanantion's

Name of the Variable	Symbol	Explanation
Corporate Social Responsibility	CSR	The CSR activities of a Firm
TobinsQ	TBQ	Market value divided by total assets
Net Income Before Tax	NIBT	Earnings before paying off tax's
Return on Assets	ROA	Net Income divided by total assets
Firm Size	FSZ	Firm's total assets
Firm Growth Rate	GRT	Firm's sales revenue
Leverage	LEV	Debt to equity ratio of firm's
Audit Quality	AQ	Audited by Big 4 audit companies or not

DV (Dependent Variable): According to our objective of the study the firm performance is the dependent variable of this study and the TobinsQ measurement and NIBT (Net income before tax) has been taken as a proxy of firm performance which is the dependent variable of this study.

The TobinsQ formula that has been used is given below:

TobinsQ = Market Value / Total Assets

Market Value = Outstanding Share / Average Share Market Price
(Market value has been calculated by multiplying a company's outstanding shares by its current market share price).

From CSR: For the dependent variable the net income of every year has been calculated from firm's financial statements.

IV (Independent Variable): The objective of this study is to measure the impact of CSR on Firm Performance. Accordingly, CSR is the independent variable and the proxy of

CSR is CSR Expenditure amount that a company has used for their CSR activities such as The WPPF (Workers Participation Provision Fund) and WF (Welfare Fund) that have been used as the independent variable in this study. The "CSR expenditure" amount that a company has accomplished within the year and it has been calculated of these following years from 2017 to 2023. The CSR expenditure have been collected from the financial statements.

CV (Control Variable):

This study applies some control variables to measure the impact of CSR on firm performance. According to previous studies such as (Mostafa, 2021) the control variables those have been taken for this study proofs that these are some of the important control variables to measure the impact of CSR on firm performance. From that reference these control variables have been taken to measure the impact of CSR on firm performance.

These are the control variables that have been taken to calculated to measure the impact:

Firm Size: is measured by the firm's total assets.

Firm Growth: is measured by the firm's sales revenue.

Leverage: is measured from the debt-to-equity ratio of the firms.

Return on Asset: company's return on assets have been calculated from annual report data. Net Income / Total Assets

Audit Quality: from which audit firm the companies have audited and finalized their annual report and financial data have also been calculated. The companies who are affiliated with the Big 4 audit companies have been symbolled as 1 and those who doesn't have it have been symbolled as 0.

3.5 Research Model

This study investigates the relation between CSR & firm performance. Firm performance is measured by 2 proxies & those are: TobinsQ measurement (TBQ) and net income before tax (NIBT). TobinsQ reflects the market performance and NIBT reflects the actual performance of the industries. These two measurements are the proxy of firm performance for this study variables meaning that these two measures have been

calculated on behalf of CSR and firm performance to measure the probable impact. The model of these two measurement variables is given below:

Model 1

$$TBQ_{it} = \beta_o + \beta_1 CSR_{it} + \beta_2 FSZ_{it} + \beta_3 GRT_{it} + \beta_4 LEV_{it} + B_5 ROA_{it} + \beta_6 AQ_{it} + \varepsilon_{it} \qquad 3.1$$

Model 2

$$NIBT_{it} = \beta_o + \beta_1 CSR_{it} + \beta_2 FSZ_{it} + \beta_3 GRT_{it} + \beta_4 LEV_{it} + B_5 ROA_{it} + \beta_6 AQ_{it} + \varepsilon_{it} \qquad 3.2$$

CHAPTER FOUR: ANALYSIS AND FINDINGS

4.1 Descriptive analysis

Table 03: Descriptive Analysis of the Variables

Variables	Mean	Std. Deviation	Min	Max
NIBT	8.38	0.87	6.15	10.32
TBQ	14.99	53.96	0	348.14
CSR	7.05	0.92	4.40	9.02
FSZ	9.66	0.63	8.35	11.02
GRT	9.31	0.73	7.41	10.78
LEV	10.42	100.65	0.015	1396.853
ROA	0.091	0.15	-0.82	0.72
AQ	0.21	0.41	0	1

All data of the study are taken from the annual report of the company from 2015/16 to 2017/18. This study considers two measurements for firm performance named NIBT (Net Income Before Tax) and TobinsQ. The above table shows the descriptive results of the study variables. The study shows that the mean value of NIBT in the pharmaceutical and chemical industries of Bangladesh that is 8.38 with standard deviation 0.87 where the minimum value 6.15 and the maximum value is 10.32. Also, the TobinsQ has the mean value of 14.99 with 53.96 standard deviation where the minimum value is 0 and maximum value is 348.14 which shows a high difference between the min and max value. The NIBT shows a medium to high relation according to the results of the values. It explains that companies are generating medium to high net profit before paying their taxes. The TobinsQ measurement shows a low mean value according to the min and maximum value. The Control variable means are CSR 7.05%, FSZ (Firm Size) 9.66%, GRT (Growth Rate) 9.31%, Lev (Leverage) 10.42%, and ROA (Return on Asset) 0.091% and the AQ (Audit Quality) is 0.21% accordingly.

4.2 Correlation matrix

Table 04: Correlation Matrix of the Variables (Significant at 1% 5% & 10% level of Significance)

|	NIBT	TBQ	CSR	FSZ	GRT	LEV	ROA	AQ
NIBT	1.0000							
TBQ	0.2397***	1.0000						
CSR	0.9665***	0.2470***	1.0000					
FSZ	0.7372***	0.0141	0.7197***	1.0000				
GRT	0.8860***	0.1804**	0.8791***	0.8201***	1.0000			
LEV	0.0620	0.3288***	0.0641	0.1068	0.0848	1.0000		
ROA	0.4429***	0.5436***	0.4406***	0.0289	0.3543***	-0.2940***	1.0000	
AQ	0.3467***	0.3528***	0.3599***	0.1617**	0.3729***	-0.0461	0.4477***	1.0000

The correlation matrix shows the correlation of CSR, NIBT, TBQ and other study variables, this relation can be categorized into three parts which are low (0.10-0.29), medium (0.30-0.49), and high (0.50-0.99). From the above table the highest and the lowest correlation have been found between CSR and Audit Quality. The CSR carries the highest amount of correlation that is 0.9665 and the leverage carries the least amount of correlation that is 0.0620. Most of the correlations in this study have a medium level of correlation. The 1%, 5%, 10% Correlation matrix of the variables ranges between -1 to +1 means that the data is normal.

4.3 Normality test

Table 05: Normal Distribution Tests and Outcomes

Name of the test	Outcome
Jarque-Bera normality test	Jarque-Bera Normality test: 4613 chi (2) Jarque-Bera test for H0: Normality
Wooldridge test for autocorrelation in panel data	H0: no first order autocorrelation F (1, 27) = 4.791 Prob > F = 0.0374

Normality test of the data shows that there is no abnormality in data, which means data are normally distributed in the figure below. Jarque-Bera normality test also represents the similar outcome, where p-value is insignificant which means the null hypothesis is accepted. The study also showed Wooldridge test for autocorrelation to check the issue of serial autocorrelation, which indicates that there is no serial autocorrelation, as p-value is insignificant, i.e., null hypothesis is accepted (Hasan, 2009; Hasan, Hossain, Rekabder, Molla, & Ashif, 2022; Hasan, Molla, & Khan, 2019; Hasan & Rahman, 2017, 2020a). Result shows that the model does not have any such issue, p-value insignificant (Prob. > F = 0.0374) means to accept the null hypotheses which refers to unlikely present of any misspecification problem in the mode. Based on the normality test, it is observed that the P-value is not significant so we need to accept the null hypotheses (there is positive relation between CSR and Firm Performance) and the data is normal according to the analysis (Hasan, 2009; Masud, Bae, Manzanares, & Kim, 2019).
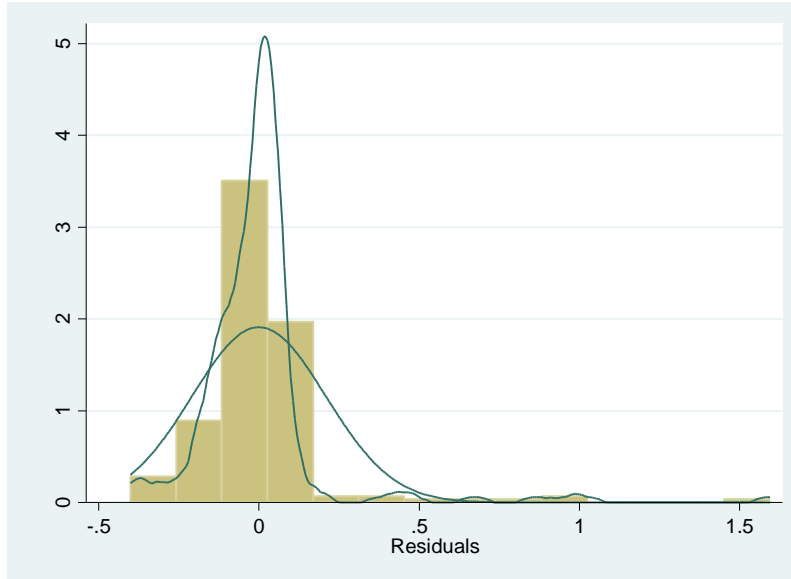
(bin=14, start=-.40103391, width=.14248115)

Figure 2 Normal Distribution of Residual

4.4 Regression model analysis

Table 06: Results of Regression Model

VARIABLES	Model 1	Model 2
CSR	6.085891	.0368617***
FSZ	8.230849**	.0500352**
GRT	9.19905**	.0557178**
LEV	.0270447***	.0001638
ROA	24.61457***	.1490883**
AQ	7.105756**	.0430389
Constant	43.84192	.2655467***
R-Squared	0.5918	0.9425
Observations	196	196

(Standard errors in parentheses: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$)

From the diagnosis of the multiple regression model variables of the test, the results can be seen of this study. The regression model analysis shows 2 variables measurement: 1. TBQ as DV (TobinsQ as Dependent Variable) & 2. NIBT as DV (Net Income Before Tax as Dependent Variable). The no. of observation is 196. Their standard errors have been taken for the measurement. Accordingly, this study assumes that the regression models are the best suitable for this study. As per the estimation there is a significant positive association between TobinsQ and NIBT as the value of the CSR is positive in both of the

models (Model 1: 6.085891 and Model 2: .0368617). Moreover, the findings show the results of more variables such as, ROA, FSZ, LEV, GRT, AQ and all of the values are positive. The probabilities (P > t) have been symbolized by (*) to show the significance level. The regression statistics suggests that CSR is overvalued by firms means that the companies in the industry are giving more than enough attention to it and spending their resources for CSR for more sustainable growth. The control variables also agree to the findings and analysis. These findings of regression model analysis shows that how each unit increase and decrease impacts both dependent and independent variables. At 95% confidence interval was used for the measurement of regression analysis (Hasan & Rahman, 2020a, 2020b; M. T. Hasan, A. A. Rahman, F. R. Sumi, A. Chowdhury, & M. Miraz, 2020; M. T. Hasan, A. A. Rahman, F. R. Sumi, A. H. M. Y. Chowdhury, & M. H. Miraz, 2020; Masud et al., 2019; Mohd Saleh, Mohd Iskandar, & Mohid Rahmat, 2007; Molla, Hasan, Miraz, Azim, & Hossain, 2021). The overall findings show a positive relation between CSR and Firm Performance. As companies are giving effort to CSR it has led to increased brand recognition, consumer demand and satisfaction, goodwill of the company and many other benefits. So, CSR is an important factor for businesses for sustainable growth.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATION

5.1 Conclusion
This study showed the relation between CSR and Firm performance within the Pharmaceutical and Chemical Industries of Bangladesh. By analyzing data from the industry and companies reports the study has provided several key findings. The findings point to a positive relation between CSR and Firm performance. Companies that actively involved in CSR initiatives established improved brand recognition, increased consumer trust and satisfaction, and better financial performance compared to those with limited CSR participation. CSR not only contributes to financial gains but also provides sustainable growth for long run. The role of CSR increases both the economic outcome and societal impact in Bangladesh. It is recommended that companies should adopt CSR policies that aligns with the goals of sustainable growth to ensure the sustainable development and continued profitability in an increasingly competitive global market.

5.2 Recommendations
Companies should integrate more and more CSR initiatives in to their business strategy. By setting clear CSR aims and objectives associated with sustainable development goals (SDG's) would ensure transparency in CSR reporting and allocating enough resources for CSR activities. Companies should give priority to understand the stakeholder's expectations to adapt CSR initiatives effectively. Companies should engage in long-term CSR planning to ensure sustainability and continuity. Companies should invest in educating employees and stakeholders and create awareness about the potential benefits of CSR. Companies should engage in R&D for more growth and sustainability.

5.3 Suggestions for Future Research
To take this study further researchers may conduct a longitudinal study to track long term impact of CSR on Firm performance. By expanding the scope of studying CSR in Bangladeshi economy could provide sector specific challenges and opportunities for CSR integration. By comparing CSR activities with other countries to understand the cultural influences, governing agendas, and industry specific dynamic forces. Examine the impact of regulatory changes for CSR policies in Bangladesh. Conduct detailed case studies of the leading pharmaceutical and chemical companies in Bangladesh that have successfully executed CSR initiatives. Categorize best practices, challenges encounters, and lessons learned that can be applied to other firms.

References

Abdulkader Omer Abdulsamad, W. F. (2016). *OWNERSHIP STRUCTURE AND FIRM PERFORMANCE: A LONGITUDINAL STUDY IN MALAYSIA.* Batu Pahat, Johor Malaysia: Universiti Tun Hussein Onn Malaysia.

Adamu, S. A. (2017). *Impact of corporate social responsibility on financial performance in the pharmaceutical industry .* Pepperdine Digital Commons, Pepperdine University .

Gu, J. (2023). *Firm Performance and Corporate Social Responsibility: Spatial Context and Effect Mechanism.* SAGE.

Minghui, Y. (July, 2018). *The Relationship between Corporate Social Responsibility and Firm Performance in Emerging Economies: Evidence from Pharmaceutical Chinese Firms.* Lisbon : ISCTE University Institute of Lisbon.

Mohamed A. K. Basuony, R. I. (2014). *THE IMPACT OF CORPORATE SOCIAL RESPONSIBILITY ON FIRM PERFORMANCE: EVIDENCE FORM A MENA COUNTRY.* Egypt .

Mostafa, M. (2021). *The Impact of Corporate Social Responsibility on the Financial Performance of Pharmaceutical Industry of Bangladesh .* Dhaka : ResearchGate .

Nur Farrahanie Ahmad Tarmizi, R. K. (2022). *Political Connections and Firm Performance on Global Fortune 500 Oil and Gas Companies .* Kota Samarahan, Sarawak, Malaysia: Secholian Publication.

Quangyen Tran, Y. T. (2013). *Organizational Structure: Influencing Factors and Impact on a Firm .* Hanoi, Vietnam.: Scientific Research .

Rabia Najaf, K. N. (June 2021). *Political ties and corporate performance: why efficiency matters?* Emerald Insight .

Rahman, M. B. (3 December, 2015). *The Impact of Corporate Social Responsibility on Firm Financial Performance .* Comilla : Journal of Business Studies.

Sharma P, C. (2020). *Impact of political connections on Chinese export firms' performance – Lessons for other emerging markets.* Journal of Business Research.

SOBHAN, R. (October 2022). *Ownership Structure and Firm Performance: Evidence from Pharmaceutical and Chemical Industry of Bangladesh .* ResearchGate .

Hasan, M. T. (2009). An Evaluation of Capital Market in Bangladesh Through statistical measurement. *The Bangladesh Accountant, 62*(5), 48-56.

Hasan, M. T., Hossain, M. K., Rekabder, M. S., Molla, M. S., & Ashif, A. S. M. (2022). IFRS adoption and real earnings management in Bangladesh: The role of board characteristics. *Cogent Business & Management, 9*(1), 2094587.

Hasan, M. T., Molla, M. S., & Khan, F. (2019). Effect of Board and Audit Committee Characteristics on Profitability: Evidence from Pharmaceutical and Chemical Industries in Bangladesh. *Finance & Economics Review, 1*(1), 64-76.

Hasan, M. T., & Rahman, A. A. (2017). IFRS adoption and Earnings Management: A Review and Justification of Earnings Management Model for Developing Countries. *ELK ASIA PACIFIC JOURNAL OF FINANCE AND RISK MANAGEMENT, 8*(3), 43-60.

Hasan, M. T., & Rahman, A. A. (2020a). The Role of Corporate Governance on the Relationship Between IFRS Adoption and Earnings Management: Evidence From Bangladesh. *International Journal of Financial Research, 11*(4).

Hasan, M. T., & Rahman, A. A. (2020b). The role of corporate governance on the relationship between IFRS adoption and earnings management: Evidence from Bangladesh. *International Journal of Financial Research, 11*(4), 329-345.

Hasan, M. T., Rahman, A. A., Sumi, F. R., Chowdhury, A., & Miraz, M. (2020). The moderating role of audit quality on the relationship between IFRS adoption and earnings management: Evidence from Bangladesh. *International Journal of Mechanical and Production Engineering Research and Development (IJMPERD), 10*(03), 9141-9154.

Hasan, M. T., Rahman, A. A., Sumi, F. R., Chowdhury, A. H. M. Y., & Miraz, M. H. (2020). The moderating role of audit quality on the relationship between IFRS adoption and earnings management: Evidence from Bangladesh. *International Journal of Mechanical and Production Engineering Research and Development (IJMPERD), 10*(03), 9141-9154. doi: https://doi.org/10.24247/ijmperdjun2020868

Masud, M., Bae, S., Manzanares, J., & Kim, J. (2019). Board Directors' Expertise and Corporate Corruption Disclosure: The Moderating Role of Political Connections. Sustainability, 11 (16), 4491.

Mohd Saleh, N., Mohd Iskandar, T., & Mohid Rahmat, M. (2007). Audit committee characteristics and earnings management: Evidence from Malaysia. *Asian review of accounting, 15*(2), 147-163.

Molla, M. S., Hasan, M. T., Miraz, M. H., Azim, M. T., & Hossain, M. K. (2021). The influence of directors' diversity and corporate sustainability practices on firm performance: Evidence from Malaysia. *The Journal of Asian Finance, Economics and Business, 8*(6), 201-212.