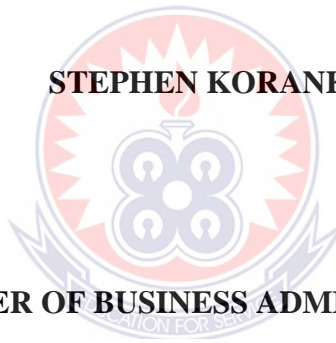# UNIVERSITY OF EDUCATION, WINNEBA

ADHERENCE TO INTEGRATED REPORTING FRAMEWORK AND PERFORMANCE OF LISTED MANUFACTURING COMPANIES IN GHANA

STEPHEN KORANKYE

MASTER OF BUSINESS ADMINISTRATION

2021

UNIVERSITY OF EDUCATION, WINNEBA

ADHERENCE TO INTEGRATED REPORTING FRAMEWORK AND PERFORMANCE OF LISTED MANUFACTURING COMPANIES IN GHANA

STEPHEN KORANKYE
(200022682)

A dissertation in the Department of Accounting,
School of Business, submitted to the School of
Graduate Studies, in partial fulfillment
of the requirements for the award of the degree of
Master of Business Administration
(Accounting)
in the University of education, winneba

OCTOBER, 2021

DECLARATION

Student's Declaration

I, Stephen Korankye, hereby declare that this dissertation, except for quotation and references contained in published works which have all been identified and duly acknowledged, is entirely my original work and that it has not been submitted, either in part or whole, for another degree elsewhere.

SIGNATURE ………………………   DATE ………………………...

Supervisor's Declaration

I hereby declare that the preparation and presentation of this dissertation were done in accordance with the guidelines for supervision of thesis laid down by the University of Education, Winneba.
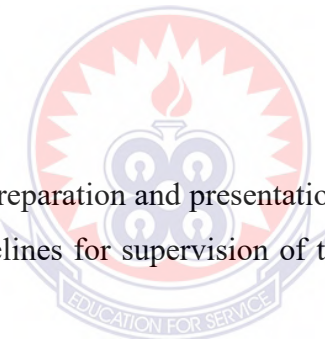
NAME OF SUPERVISOR: MR. SAMUEL GAMELI GADZO

SIGNATURE …………………….   DATE …………………………..

DEDICATION

This dissertation is dedicated to my caring Grandfather, Mr Akwasi Nyame, and the entire family.
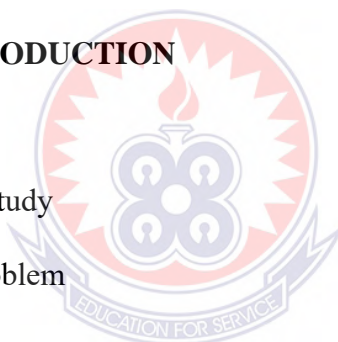
ACKNOWLEDGEMENT

My sincere gratitude goes to my supervisor, Mr Samuel Gameli Gadzo, who provided individual assistance in guiding me through completing this research. I cannot forget to thank my church, family, friends and colleagues for their moral support and those who helped me in diverse ways to complete this dissertation.
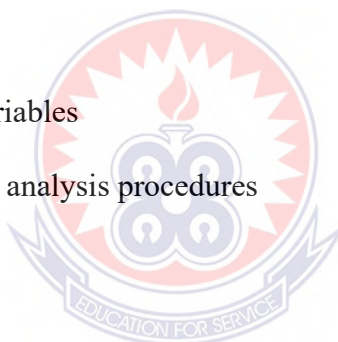
TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Figure   **Page**

ABBREVIATIONS

ACCA	Association of Chartered Certified Accountants
ACFE	Association of Certified Fraud Examiners
AF	Audit Firms
AIG	American Insurance Groud
AQ	Asset Quality
BOG	Bank of Ghana
BS	Business Sustainability
CGPI	Corporate Governance Perception Index
ESG	Environmental, Social, Governance
EVA	Economic Value Added
FA	Firm Age
GIN	Governance Index
GRG	General Reporting Guideline
GSE	Ghana Stock Exchange
ICAG	Institute of Chartered Accountants, Ghana
IES	Industry Environmental Sensitivity
IFAC	International Federation of Accountants
IFRS	International Financial Reporting Standards
IIRC	International Integrated Reporting Council
IMF	International Monetary Fund
IR	Integrated Reporting
IRDI	Integrated Reporting Disclosure Index
IRF	Integrated Reporting Framework
IRG	Integrated Reporting Guideline

ISO	International Standards Organisation
LQ	Liquidity
NB	Independent Board of Directors
NGO	Non-Governmental Organisation
NOPAT	Net Profit After-Tax
ROA	Return on Assets
ROI	Return on Investment
SEC	Security Exchange Commission
SG	Sales Growth
SR	Sustainability Report
SZ	Firm Size
WACC	Weighted Average Cost of Capital
WBCSD	World Business Council for Sustainable

ABSTRACT

This study sought to investigate the degree of adherence to the integrated reporting framework and its effect on the performance of listed manufacturing companies in Ghana. The study employed the descriptive and causal research designs for the analysis after secondary data was drawn from the audited annual reports of ten (10) listed manufacturing companies observed from 2014 to 2020. The panel regression results were generated from the EViews version 12 software programme. The study employed content analysis of annual reports to identify the non-financial information disclosed. From the result, it was found that an integrated reporting framework has no significant influence on profitability. The result also revealed that sales growth, independent board of directors, assets quality, business sustainability, age general reporting guideline, governance index, audit firms, and liquidity statistically influence a firm's profitability. Still, firm size does not significantly affect profitability. The study disclosed that the determinants of the integrated reporting framework included liquidity, firm age, sales growth, sustainability reporting, business sustainability, general reporting guideline and audit firm. It was further revealed that firm size, assets quality and independent board of directors are not determinants of IRF. Finally, the study finds that the size of the firm significantly influences financial performance. The study suggests that manufacturing companies should improve non-financial information, especially on strategies and resources allocation in their financial statements. It further recommended that to increase their profitability, it has to increase their liquid assets, sell more of their products or services (sale growth), adhere to the general reporting guidelines, engage on an independent board of directors, ensure assets quality and employ a governance index of improving performance.
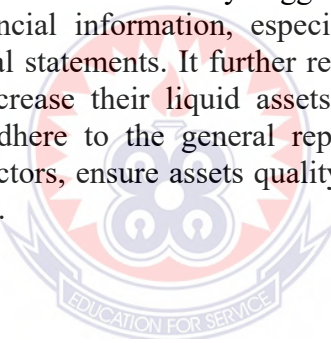
CHAPTER ONE

INTRODUCTION

1.0 Overview

This introductory chapter discusses the background to the study, statement of the problem, the purpose and the objectives of the study, research questions and hypotheses. It also talks of the significance of the study, delimitation of the study, limitation of the study, and organization of the study.

1.1 Background to the study

Integrated Reporting (I.R.) is a relatively new phenomenon in the world of corporate reporting. That has gained significant momentum in recent years and is an emerging international corporate reporting initiative to address limitations of existing corporate reporting approaches, which are commonly criticized for being both voluminous and disjointed (Zhou, Simnett, & Green, 2017). According to IIRC 2013, Integrated Reporting is a process founded on integrated thinking that results in a periodic integrated report by an organization about value creation over time and related communications regarding aspects of value creation. An integrated report is a concise communication about how an organization's strategy, governance, performance and prospects, in the context of its external environment, lead to value creation in the short, medium and long term.

The need for non-financial reporting, also known as integrated reporting, has become an essential issue with stakeholders. Thus, corporate reporting has begun to include integrated reporting, which was, however, voluntary. The IIRC is a global coalition of regulators, investors, companies, standard setters, the accounting profession and NGOs, who believe that communication about value creation should

1

be the next step in the evolution of corporate reporting. The I.R. framework has been developed to meet this need and to provide a foundation for the future. It is anticipated that I.R. will become the corporate reporting norm (Addo, 2015; The IRF, 2013; IIRC, 2013). With stakeholders increasing interest in what goes on in an organization aside from profits being reported, over the last two decades, the trend in reporting where firms only reported on financial issues and ignored non-financial issues has changed (Havlova, 2015; Ioannou & Serafeim, 2011; Havlova, 2015; Marx and Der Watt, 2011). Non-financial information became a growing concern with stakeholders. Stakeholders started to focus on environmental protection or social responsibility issues as well. Ioannou & Serafeim (2011) proposed that stakeholders started to monitor non-financial reports because mandatory sustainability reporting positively impact socially responsible management practices. After all, it leads to the prioritization of sustainability development, employee training, and increased implementation of ethical practices by the firms and decreased corruption. Companies also accepted that they have responsibilities towards stakeholders other than shareholders. Companies began to report on environmental issues, social issues and governance issues.

In addition, the survey performed by the Association of Chartered Certified Accountants in 2013 reveals that "more than 90% of investors surveyed said it would be valuable for companies to combine financial and non-financial information into an integrated reporting model" (ACCA, 2013). Although many companies are working and many investors are interested in integrated reporting, there is an unanswered question regarding how integrated reporting affects corporate earnings and the degree of adherence to IRF in developing countries, precisely Ghana.

Another contributing factor for the introduction of I.R. has been the various global financial crisis and scandals followed soon after scrutiny of traditional accounting and reporting models such as the New York Stock exchange in 1929, the waste management scandal in 1998, the Enron scandal in 2001. WorldCom scandal in 2002, Tyco scandal in 2002, HealthSouth scandal in 2003, Freddie Mac scandal in 2003, American Insurance Group (AIG) scandal in 2005, Lehman Brothers scandal in 2008, Bernie Maddoff scandal 2008 and the SYSTEM scandal in 2009. Again in 2018, there was five most scandalous fraud according to the Association of Certified Fraud Examiners (ACFE); the Theranos Inc. scandal $1 billion money lost from 2003 to 2018, Danske Bank $234 billion money-laundering scandals, Largest Health Care fraud takedown in U.S. $2 billion money lost, Punjab National Bank $2 billion money lost, Former Malaysian prime minister at Center of 1MDB scandal. Lastly, in 2017, the Bank of Ghana (BoG) reported that G.H. ¢30.08 million money the banking sector in Ghana lost to various types of fraud. Reported incidents of fraud increased by 41.66%, from 1001 cases in 2016 to 1,418 in 2017. These are some of the major accounting scandals that called the credibility of the accounting profession to question, greatly affected stakeholders (primarily investors), and contributed to the global recession (Elliot & Elliot, 2011; Wild & Staden, 2013).

The large number of firms that already produce an integrated report is a testament to the effectiveness of the IIRC's argument regarding the benefits of integrated reporting. It has also been another factor for the spread of I.R. It has also indicated that I.R. should be the best reporting system of our time. I.R. was already discussed and emerged as a reporting practice before the advent of the IIRC. For example, in 1999, PwC introduced its 'Value Reporting Framework', which initiated the debate around I.R. In 2002, Novozymes (a Danish enzyme company which is a

spin-off from the healthcare firm Novo Nordisk) issued the first integrated report, shortly followed by Novo Nordisk's integrated report.

Barth, Cahan, Chen, & Venter (2017), in their research, find that (1) there is a positive association between integrated reporting quality (IRQ) and liquidity which support the capital market channel; (2) there is no evidence of an association between IRQ and cost of capital; (3) there is a positive relationship between integrated reporting quality and expected cash flows. Therefore, Barth et al.'s (2017) findings generally suggest that I.R. effectively achieves the two objectives of improved external information and better internal decision-making, including corporate earnings.

Some researchers have also proved that there is an association between I.R. and earnings. Shirabe & Nakano (2019) examines whether the introduction of I.R. affects earnings management. They find that firms are more likely to report conservative earnings after introducing I.R. in accrual-based and real earnings management. They also find that the effect of I.R. on earnings management appears approximately two years after the introduction of I.R. and concluded that this evidence is consistent with practitioners' point that I.R. is a continuous improvement process and takes several years to improve decision making. Finally, their findings provide evidence for standard setters and regulators interested in the merits of integrated reporting that I.R. promotes decision making with a long-term focus, resulting in more conservative earnings management.

Freeman (1984), one of the earliest stakeholder theorists, states that a stakeholder is a group of individuals or individuals who can affect or be affected by the achievements of a firm's objectives. Freeman (as cited in Donkor & Deborah, 2017) also established that, indeed, the activities of stakeholders do play a significant

factor in the corporate decision making of an organization. Meeting stakeholders demands will become an effective tool in achieving the strategic objectives of a firm.

` The institutional theory also believes that when institutions are strong enough, the adoption or adherence to I.R. will be effortless and effective. Companies may agree on non-financial information disclosure because of institutional pressures to follow the practice of their peers (Ramdhony, 2015). The author further asserts that accounting symbolizes one form of institutionalized exercise within organizations. Carpenter & Feroz (2001) assert that institutional theory can be used to explain accounting rule choice. Therefore, the researcher seeks to empirically study the effects of integrated reporting on earnings and the degree of adherence to the Reporting Framework of manufacturing companies listed on GSE and add to the limited literature and discussion on I.R.

1.2 Statement of the Problem

The global village implies that corporate firms, especially those listed on the stock market, must be abreast with new developments. The International Federation of Accountants (IFAC) has adopted and complies with International Financial Reporting Standards (IFRS). IFAC is part of IIRC developers; hence it is safe to say that companies in Ghana can soon become part of this regime. Anglo Gold Ashanti has already started. It published its integrated report based on the IIRC's framework in 2014.

Additionally, the presence of manufacturing companies will also ensure that companies move towards I.R. to ensure comparison and consistency where their parent companies are using the I.R. framework. Suppose the 44 firms currently listed on the Ghana Stock Exchange (GSE) hope to continue to meet and attract

5

international investors. In that case, they will all need to start producing integrated reports to meet international standards (GSE, 2016).

In Ghana, the adoption of Integrated Reporting is not mandatory but considered a voluntary practice. Disclosure as part of the IFRS, companies have been providing environmental, social and governance information in disconnected strands within their annual reports. Stakeholders now value information on the forward-looking sustainability of a company as much as they value its historical financial information. From this backdrop, some of the companies listed on the Ghana Stock Exchange (GSE) have lately started following the Integrated Reporting Framework in preparing their annual reports that incorporate both the financial and non-financial information about the company in a structured manner. Moreover, even those companies practising this I.R. may not wholly adhere to a unique "Integrated Reporting Disclosure Index (IRDI) established by the IIRC. Additionally, the study of Donkor & Deborah (2017) revealed that, when it came to the general awareness of I.R., accounting practitioners in Ghana had a limited idea of what the concept is.

Finally, integrated reporting is a relatively new phenomenon in corporate reporting that has gained significant momentum in recent years, especially in Europe, Asia and other parts of Africa. Little research has been conducted in South Africa, where I.R. is mandatory (Donkor and Deborah, 2017; Haruna Maama & Msizi Mkhize, 2020). Little or no research has been conducted on the degree of adherence to I.R. and its effect on earnings. For these reasons, this study empirically examines the effects of integrated reporting on earnings and the degree of adherence to the Reporting Framework by manufacturing companies listed on GSE. It adds to the limited literature and discussion on I.R.

1.3 Purpose of the study

This study sought to give an idea of what integrated reporting is about, creating awareness of I.R., the extent of non-financial information listed manufacturing companies on GSE are disclosing, and the degree of adherence to the Integrated Reporting Framework provided by the IIRC has on companies' earnings. The study's findings will help International Standards Organization (ISO), Securities and Exchange Commission (SEC). Other professional bodies to make I.R. a mandatory or a reporting norm for all listed companies to enable easy comparison and provide detailed information on a reporting company to its investors, both financial and non-financial, for better decisions.

1.4 Objectives of the Study

The specific objectives are to:

1. investigate the disclosure of non-financial information of listed manufacturing companies
2. identifies the determinants of the Integrated Reporting Framework.
3. estimate the effect of adherence of the Integrated Reporting Framework on earnings.

1.5 Research questions

1. Are the listed companies following the Integrated Reporting Framework?
2. What are the determinants of the Integrated Reporting Framework?

1.6 Hypothesis of the study

The present study seeks to establish that adherence to I.R. is a function of increased earnings of companies listed on GSE. Hence the following hypothesis is set:

H_o: There is a relationship between adhering to integrated reporting and performance.

H_1: There is a relationship between adhering to integrated reporting and performance.

To test the validity of the hypotheses, ten (10) manufacturing companies listed on GSE were selected for the study. The study's objectives are clearly defined to avoid ambiguity in dealing with the hypotheses and organising the survey on sound line.

1.7 Significance of the study

This study seeks to determine how much material non-financial information the listed companies are providing and to what degree it is adhering to the Integrated Reporting Framework provided by IIRC. It also seeks to determine whether the companies have improved the quality of information available to providers of financial capital and its effects on earnings. Also, the study will seek to identify whether the companies are supporting integrated thinking, decision making and actions. The researcher hopes that the findings from the study will add to the limited literature on I.R. The result would encourage Ghanaian companies, professional bodies, and other organizations to begin public discussions on I.R., leading to it being adopted as the reporting norm Ghana. The study's findings will also help investors, creditors, employees, customers, and other stakeholders know whether integrated reporting will give them an overview of the holistic nature of the companies and promote long-term value creation.

To policymakers, such as organizational managers and accountants, the findings will help them make accurate forecasts and institutions that can force economic actors to adopt I.R. Standard makers like Institute of Chartered Accountant, Ghana (ICAG), Securities and Exchange Commission (SEC), Ghana Stock Exchange (GSE), International Standards Organization (ISO), the World Business Council for Sustainable Development (WBCSD) and the International Monetary Fund (IMF), can

therefore make I.R. as general reporting norm for all listed companies when the findings prove to be the best reporting practice.

1.8 Delimitation of the study

Integrated reporting is a new phenomenon of financial reporting which has become essential to capital providers asking companies to include non-financial information in their corporate reporting statements. A survey performed by the Association of Chartered Certified Accountants in 2013 reveals that "more than 90% of investors surveyed said it would be valuable for companies to combine financial and non-financial information to have a holistic idea of the company when making decisions. There are no studies on the degree of adherence to an integrated reporting framework and its effect on earnings in Ghana. The focus on I.R. provides how value is created, information communicated, and empirical literature.

1.9 Scope of the study

The study investigates the integrated reporting practices of manufacturing companies listed on the Ghana Stock Exchange. The researcher will deal with ten (10) manufacturing companies listed on the GSE over seven years, 2014 – 2020, using their annual reports as a source of data. These ten (10) manufacturing companies were selected because a study has shown that companies operating in highly polluting sectors are more likely to publish integrated reports more aligned with the I.R. framework (Ranjita & Mohammad (2018). The span of seven years, 2014 – 2020, is deemed appropriate due to the availability of data for the analysis and the prescribed number of manufacturing companies listed on GSE.

1.10 Organization of the Study

The organization of the study is structured along the following chapter outline. The first chapter introduces the research and comprises the research background, research problem, objectives of the study, the formulation of appropriate hypotheses, research significance, the scope of the study and the chapter synopsis. A review and discussion of relevant theoretical framework, prior empirical research literature and the conceptual framework on I.R. and its effect on earnings in chapter two. The third chapter highlights the research design, the methodological approach, and the analysis tools applied in the study's conduct. It includes the study area, study population, sampling techniques and sample size and data collection method, research design and empirical estimation model, variable considerations and measurement, data processing and mode of analysis. Chapter four entails data presentation and analysis, as well as a discussion of the results. Finally, chapter five summarises the findings, conclusions and recommendations. The references and appendices follow this chapter.
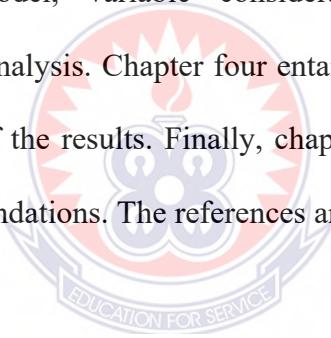
CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents a three-sectional discussion of the theoretical consideration for the study, a review of prior empirical studies relevant to this research and the conceptual framework.

2.1 Theoretical Framework

This section looks at the theories underlying integrated reporting practices, the degree of adherence, and their effects on earnings in developing countries, particularly Ghana.

2.1.1 Legitimacy Theory

(Suchman, 1995) stated that legitimacy theory is grounded in the idea that firms undertake specific actions congruent with prevailing social norms and values and communicate these actions to stakeholders. Deegan & Gordon (1996); Bronco & Rodrigues (2006); Wong (2011); Deegan & Rankin (1996); Ghosh (2015); Gray, Kouhy & Lavers (1995); and Ramdhony (2015) have also applied legitimacy theory to scrutinize the practices of green and social disclosure among companies. It is asserted that support from the community is critical for companies' sustainability, survival, growth, and image. However, Tsang (1998) and Alawi & Rahman (2011) assert that to obtain such support, companies have to voluntarily release precise information to persuade the community that their activities are legitimate, appropriate, genuine and supportive. Accordingly, Newson & Deegan (2002) also contend that the legitimacy theory directly depends on the concept of the social contract, which focuses on how organizations depend on their environment, the varying expectation of

11

the community and how a company endeavours to rationalize its presence in the society by legitimizing its activities.

Wong (2011) suggests that corporate green information disclosure through the eyes of legitimacy theory primarily includes simultaneous analysis of reporting practices concerning the executive branch of stakeholder theory. Hogner's (1982) findings suggest that the disparity in disclosures may be connected to changing expectations from the constituents of the society. Deegan & Rankin (1996) also examined variations in companies' green information disclosure policies in Australia around the time of established environmental prosecutions. The authors ascertained that prosecuted companies disclosed significantly more positive environmental information in the year of prosecution than any other year. Compared to companies that have not been prosecuted, those companies also disclosed environmental information, possibly to parry and deflect attention away from their environmental crimes. Choi, Lee &Psaros (2013) also observed that the tendency to disclose green and social information is also being linked to the public attention in the society on the reporting companies.

2.1.2 Stakeholder theory

The stakeholder theory underpins this study. According to Parmar, Freeman, Harrison, Wicks, Purnell & Cole (2010), stakeholder theory came about as a new concept to know and solve three related business problems. These are "the problem of understanding how value is created " Stakeholder theory acknowledges that diverse stakeholder groups have different opinions on how a company should be managed (Kamla & Rammal, 2013). In a review study on green and social information disclosures, Owen (2008) observed a scantiness of studies scrutinizing stakeholders' perspectives on green and social information disclosure. It is, thus, essential to study

the views of various stakeholder groups, and it is only in this means that firms can better be informed as to how to respond to the information needs of different stakeholder groups.

Stakeholder theory considers the firm from a broader perspective, whereby shareholders are only one of many potential stakeholders. Other stakeholders include creditors, employees, suppliers, government authorities and the public as a whole. The premise is that since society provides the social structure and framework in which firms can prosper, ignoring society threatens the equilibrium that it (the public) provides.

Freeman (1984), one of the earliest stakeholder theorists, states that a stakeholder is a group of individuals or individuals who can affect or be affected by the achievements of a firm's objectives. Freeman (as cited in Donkor & Deborah, 2017) also established that, indeed, the activities of stakeholders do play a significant factor in the corporate decision making of an organization. Meeting stakeholders demands will become an effective tool in achieving the strategic objectives of a firm.

The executive branch of stakeholder theory predicts that a firm will tend to satisfy the information demand of stakeholders essential to the firm's ongoing survival. Whether a particular stakeholder receives information depends on how powerful they are perceived to be and the extent to which they control the scarce resources (Cupido 2008).

The stakeholder's theory approach is used in the literature to understand how value is created and traded and all forms of relationships between a business, the groups and individuals who can affect or be affected by its operations and the kind of information needed by each stakeholder.

2.1.3 Institutional pressures theory

An institutional theory emphasizes the role of social and cultural pressures imposed on organizations that influence organizational practices and structures (Scott, 1992). DiMaggio and Powell (1983) argue that three institutional mechanisms strongly influence managerial decisions; coercive, mimetic and normative isomorphism – that create and diffuse a standard set of values, norms and rules to produce similar practices and structures across organizations that share a common organizational field. The coercive isomorphism refers to the presence or absence of institutions that can force economic actors to adopt I.R. and to align their local accounting standards with I.R. Examples include the Institute of Chartered Accountant, Ghana (ICAG), Securities and Exchange Commission (SEC), Ghana Stock Exchange (GSE), and the International Monetary Fund (IMF) generally provides developing countries with foreign aid with a requirement to make financial reforms and adopt and adhered to I.R. The second type is the mimetic isomorphism which refers to the imitation of other nations viewed as more legitimate and successful. Professional accounting organizations may exert some pressure to move toward I.R. Finally, the third type is normative isomorphism, which refers to a country's educational attainment level (DiMaggio & Powell, 1991). In this regard, the percentage of the educated population may also affect accounting practices and therefore may shift toward I.R.

Companies may agree on the form of non-financial information to disclose because of institutional pressures to follow the practice of their peers (Ramdhony, 2015). The author further asserts that accounting symbolizes one form of institutionalized exercise within organizations. Carpenter and Feroz (2001) assert that institutional theory can be used to explain accounting rule choice.

It has been argued that the institutional theory adds to clarify accounting practice in companies and society (Hoque & Alam, 1999). Companies may have to establish their conformity with and adherence to the expectations, customs and principles that are appreciated by the residents of the society to obtain the backing of society and, hence, achieve legitimacy (Owen, 2013).

Accordingly, Rahaman, Lawrence & Roper (2004) posit that, in scrutinizing the external reporting practices of organizations as part of the institutional practice, it is essential for one to be watchful that eventually, firms are striving for a state of legitimacy and societal support. In a recent U.K. study, Collison, Cobb, Power & Stevenson (2009) found that firms cherish being included as members of the FTSE4 Good index because of peer group pressure. The authors reported that firms must adequately engage in green and social information disclosures to be included in the index. Islam & Deegan (2008) find that pressures and forces from multi-national consumers have forced local apparel suppliers to initiate organizational communication to dismiss concerns of unacceptable labour practices.

Neu &Ocampo (2007) also observed that to secure funds from international bodies like the World Bank, some developing countries might be required to embrace certain accounting and reporting practices as required by the World Bank.

2.1.4 Lessons from the theories

Stakeholder theory was deemed appropriate for the study because it is consistent with the view that, for businesses to continue to thrive and achieve their objectives, they will have to understand that a firm deals with a large group outside its shareholders. It also needs to work effectively and efficiently to meet the demands of each stakeholder. Suffice to say, the persistent demand by stakeholders over the years

for non-financial reports to be included in corporate reports (i.e. I.R.) is being met by the IIRC in pushing for the IRF to be the corporate reporting norm. A lot of literature has used stakeholder theory on corporate social reporting, examined the influence of stakeholders and other accounting practices, and an effective way of disclosure in solving information asymmetry.

Again, legitimacy theory is also deemed appropriate for the study because it has come to the point that companies have to prove to their stakeholders, especially the citizens, in the environment in which they operate. They conform to the social norms and values. Therefore, companies must report using these resources that will not disadvantage generations unborn and ensure sustainable development. It is sufficient to say; corporate firms could not continue to remain adamant about the calls from stakeholders, including society, to produce a holistic and transparent report.

Lastly, Feroz (2001) asserts that institutional theory can explain accounting rule choice with the institutional theory. It has been argued that the institutional theory adds to clarify accounting practice in companies and society. Companies may have established conformity with and adhere to the expectations, customs, and principles appreciated by residents of society to obtain the backing of society to achieve legitimacy. Therefore, firms can be a force (typically by legal or stakeholder pressures) to adopt I.R.

2.2 Empirical Review of the study

This section reviews previous empirical works relevant to the study and provides the basis for the research questions and objectives development. Consequently, the use of archival data for empirical research on integrated reporting

16

has just begun. The researcher will first discuss the outline of the IIRF and then review prior literature on the economic effect of integrated reporting.

In the IIRF, the IIRC listed the following four aims of integrated reporting: Improve the quality of information available to providers of financial capital to enable a more efficient and productive allocation of capital; Promote a more cohesive and efficient approach to corporate reporting that draws on different reporting strands and communicates the full range of factors that materially affect the ability of an organization to create value over time; Enhance accountability and stewardship for the broad base of capitals (financial, manufactured, intellectual, human, social and relationship, and natural) and promote understanding of their interdependencies and Support integrated thinking, decision-making and actions that focus on creating value over the short, medium and long term.

Integrated reporting is intended to improve the information available to external parties and improve internal decision-making. Eccles and Serafeim (2015) describe terms such as a function of integrated reporting as a "transformation function" and distinguish it from an "information function," which is more generally underscored in conventional financial reporting. Therefore, examining the effect of the introduction of integrated reporting on internal decision making and behaviour within a company would be helpful to those involved in formulating the IIRF and other standard setters. Several previous studies have conducted analyses focusing on these economic impacts and characteristics of integrated reporting.

2.2.1 Empirical review on integrated reporting and the degree of adherence

Donkor & Deborah (2017), the study's main objective was to determine the development of Integrated Reporting (I.R.) in Ghana among practising accountants.

17

The study adopted the qualitative research approach, specifically, the exploratory research design. The study's findings revealed that accounting practitioners had little idea of the concept regarding the general awareness of I.R. Another finding was that respondents could not clearly distinguish between I.R. and sustainability reporting. Respondents' responses revealed their lack of knowledge in the IIRC and the I.R. framework activities hence their inability to interpret and appreciate the meaning and scope of I.R fully. Finally, the study revealed that their responses about challenges and benefits of adopting and implementing I.R. stem from their thoughts, experiences and competencies. The study recommended that the IIRC further articulates and refines aspects of the framework to give a comprehensive understanding of the concept of I.R.

Islam & Rakibul (2018) studied insights into the practice of integrated reporting: a study on MNCs in Bangladesh on the degree of adherence to the Reporting Framework. The results show that most of the Integrated Reporting Disclosure Index (IRDI) items were disclosed in the Chairman's Report, Director's Report, Corporate Governance Report, and Notes to the Financial Statements. The results show an increasing trend of disclosing non-financial information by the selected companies as the Integrated Reporting Framework requires. The findings reveal that the growing demand for non-financial information by the different stakeholders of multi-national companies has compelled the companies to focus and disclose more and more non-financial facts. Companies are now measuring their performance based on their impact on the environment and society. They are giving more importance to the governance structure and culture of the company and are disclosing this information to the stakeholders. They are more concerned about revealing the sustainability of their performance and position than ever before. In

analyzing the disclosures made by each company, it was found that the highest number of disclosures was 92 IRDI followed by 91, and the lowest was 50. It was visible that the most extensive disclosure has been made under the "Total Organizational Overview" category (192 disclosures), followed by the "Total Governance" category (167 disclosures). There were 135 disclosures on Total External Environment, 98 disclosures on Total Outlook and Total Basis of Preparation and Presentation and 92 disclosures on Total General Reporting Guidelines. Sixty-nine (69) disclosures were made under the "Total Business Model" category, 67 disclosures under the "Total Risks & Opportunities" category. The lowest disclosures were made regarding Total Strategy and Resource Allocation.

Maama & Appiah, (2019). The purpose of this study is to examine the extent of the voluntary green accounting practice of companies listed on the Ghana Stock Exchange (GSE). Reporting only the financial performance of an organization is no longer the focus of reporting because, gradually, investors and other stakeholders demand that companies report on their effect on the environment and society. Therefore, accounting and reporting for the environment have increasingly become important to stakeholders and organizations because of the effect of an organization's environmental and social performance on its financial health. The analysis was based on content analysis of 202 annual reports of 23 listed firms in Ghana from 2006 to 2015. Findings – The mining, oil and gas sector has integrated environmental sustainability information in their accounting system.

Regarding the nature of green disclosure, the content analysis depicts that only positive qualitative disclosures were provided in the annual reports. Again, almost all the companies increased the quality and quantity of environmental disclosures over the years. The researcher also suggested that the service and manufacturing sectors

integrate environmental sustainability information in their accounting system, enhancing their legitimacy to access critical resources for survival.

Maniora (2017) examines the impact of integrated reporting on improvement in internal decision making from the perspective of; internalization: the degree of integration of business models with non-financial elements such as environmental, social, and governance (ESG) externalization: economic performance and ESG performance. Maniora (2017) reports that integrated reporting companies are superior in internalization and externalization to non-ESG reporting companies but inferior in internalization and externalization to ESG reporting companies. Thus, Maniora's (2017) findings suggest that, compared to other corporate reporting, integrated reporting may not be a superior mechanism for improving internal decision making.

Since the 2008 Global Financial Crisis like the Brothers scandal in 2008, Bernie Maddoff scandal in 2008 and others, short-term investors, who intend to maximize short-term return on investment, have been criticized for promoting managers' short-termism and disturbing companies' long-term value creation (Kay, 2012; Barton and Wiseman, 2014). As one way of resolving this situation, integrated reporting is expected to correct the short-term orientation and promote long-term value creation, which interests a wide range of stakeholders, including employees, suppliers, customers, and business partners (IIRC, 2013; Eccles, 2017; Klasa, 2018).

Merve and Cemil (2018) assess the current company reports according to the IIRC integrated reporting framework. The authors' findings revealed that current company reports mainly present generic rather than company-specific; provide positive information while dismissing negative information; present financial and non-financial initiatives separately, lack a strategic focus; and include backwards-looking rather than forward-looking information. The authors found that the IRS is

20

significantly and positively associated with sustainability reporting, Global Reporting Initiatives (GRI) adoption, sustainability index listing and the presence of a sustainability committee.

The following studies (e.g. Villiers, Venter & Hsiao, 2017; Eccles & Krzus, 2015; IRFCI, 2019; Simnett & Huggins, 2015) have also looked at the I.R. as the reporting norm due to the various financial scandals across the world and claiming that I.R. is a new phenomenon which has generated a lot of interest globally but with little literature works, therefore, more has to be done mainly, how companies adhere to the content elements of IRF, cost and benefits.

2.2.2 Integrated reporting and its effects on performance

Barth, Steve, Chen &Venter (2017) investigated the economic consequences of integrated reporting quality (IRQ): Capital market and Real effect. They found a positive association between IRQ and firm value by examining two channels through which this association may arise: a capital market channel and a real effect channel. Firm Value was disaggregated into three components: liquidity, cost of capital and expected future cash flows. The result shows a positive association between IRQ and liquidity, which support the capital market channel. They also find no evidence of a relation between IRQ and the cost of capital. They also find a positive association between IRQ and expected future cash flows. Because this association could reflect better investor cash flow forecasts – a capital market effect better internal decisions – a real effect, or both, they attempt to distinguish these explanations. They find that higher IRQ is (not associated with higher realized future performance (greater analyst target price forecast accuracy) and less over – and underinvestment. These findings support the real effects channel. Together, their results are consistent with I.R.

achieving its dual objective of improved external information and better internal decisions.

Evidence from prior literature also reveals that analysts use non-financial information in their earnings forecasting (Dhaliwal, Radhakrishnan, Tsang &Yang, 2012; Nichols & Wieland, 2009; Orens & Lybaert, 2007; Simpson, 2010; Zhou, Simnett & Green, 2017). These studies provide evidence that analyst forecast error reduces as a company's level of alignment with the IRF increases. Further, the improved alignment is associated with a subsequent reduction in the cost of equity capital for certain reporting companies and concluded that I.R. provides incrementally helpful information to the capital market over and above existing reporting mechanisms in Johannesburg.

Serafeim (2015) this study examines the relationship between Integrated Reporting (I.R.) and a firm's investor base composition. It was found that firms that practice I.R. have a more long-term oriented investor base with more dedicated and fewer transient investors. This result is more pronounced for firms with high growth opportunities, not controlled by a family, operating in 'sin' industries, and exhibiting more stable I.R. practice over time. It was indicated that the results were robust to the inclusion of firm fixed effects, controls for the quantity of sustainability disclosure, and alternative ways of measuring I.R. Moreover, the researcher shows that investor activism on environmental or social issues or any concerns about a firm's environmental or social impact leads a firm to practice more I.R. This investor or crisis-induced I.R. affects the composition of a firm's investor base. According to Serafeim's (2015) findings, I.R. efforts can attract long-term oriented investors and can play a role in promoting managers' long-term decision making. Therefore, when examining the impact of integrated reporting on corporate behaviour, we should

consider the expected role of integrated reporting: correcting companies' short-term orientation and promoting long-term value creation.

2.2.3 Integrated reporting and other related issues

Eccles & Serafeim, (2017). Corporate and integrated reporting: A functional perspective. They found out that I.R. contributed to effective corporate stewardship. Moreover, it is the norm for reporting and the solution to criticism made in the traditional reporting system, as indicated in the case study of Coca-Cola Hellenic Bottling Company (Coca-Cola HBC) Integrated Report in 2012, the second-largest bottler of Coca-Cola products in the world.

Jensen & Berg (2012) study was to analyze similarities and differences between companies with traditional sustainability reporting (TSR) and those that publish integrated reports. Based on the institutional theory, they identify potential determinants of integrated reporting (I.R.) and test their relevance empirically in a sample of 309 companies. Their analysis shows that I.R. companies are different from TSR companies concerning several country-level determinants. In particular, investor and employment protection laws, the intensity of market coordination and ownership concentration, the level of economic, environmental and social development, the degree of national corporate responsibility and the value system of the country of origin proved to be relevant. Moreover, they also found that I.R. is more likely to be published in countries with strong investor protection laws and again indicated that I.R. Companies are significantly more likely to originate from countries with weaker employment protection laws.

2.2.4 Content elements of the integrated reporting framework

The integrated reporting framework is a principal-based document containing "fundamental concepts", guiding principles", and "content elements" (Cheng, Green, Conradie, Konishi and Romi, 2014). The preparation and presentation of an integrated report are underpinned by seven guiding principles, including strategic focus and future orientation; connectivity of information; stakeholders relationships; materiality; conciseness; reliability and completeness; and consistency and comparability (IIRC, 2013). An integrated report would incorporate content elements, such as an organizational overview and the external environment, governance, business model, risk and opportunities, strategies, performance, outlook and basis of preparation and presentation (IIRC, 2013). Hence, the content of an integrated report is built upon those elements. Table I demonstrates the definitions of the content elements of the IIRC framework.
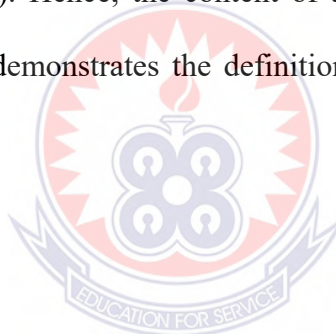
Table 1: Content elements of IIRC framework

Content elements	Definition
organisational overview and external environment	An integrated report covers what an organization does and the circumstances under which it operates
Governance	An integrated report provides insight about organisation's governance structure ability to create value in the short, medium and long term
Business model	An integrated report describes the organisation's business model, which is its system of transforming inputs, through its business activities, into which outputs and outcomes that aims to fulfil the organisation's strategic purposes and create value over the short, medium and long term
Risk and opportunities	An integrated report identifies the key risks and opportunities that affect the organization's ability to create value over the short, medium and long term
Strategies	An integrated report describes an organisation's short, medium and long term strategic objectives and its strategies to achieve those objectives
Performance	An integrated report presents whether the company has achieved its strategic objectives and the outcomes in terms of effects on the capitals
Outlook	An integrated report highlights the challenges and uncertainties which the organisation is likely to encounter in pursuing its strategy and potential implications for its business model and future performance
Basis of preparation and presentation	An integrated report describes the organisation's materiality determination process, the description of the reporting boundary, significant frameworks and methods used to qualify or evaluate material matters

Source: Adapted from IIRC, 2013 framework (IIRC, 2013)

2.3 Conceptual Framework for the study

Based on the literature review, the following conceptual framework has been developed to explore the various variables in the study.

25
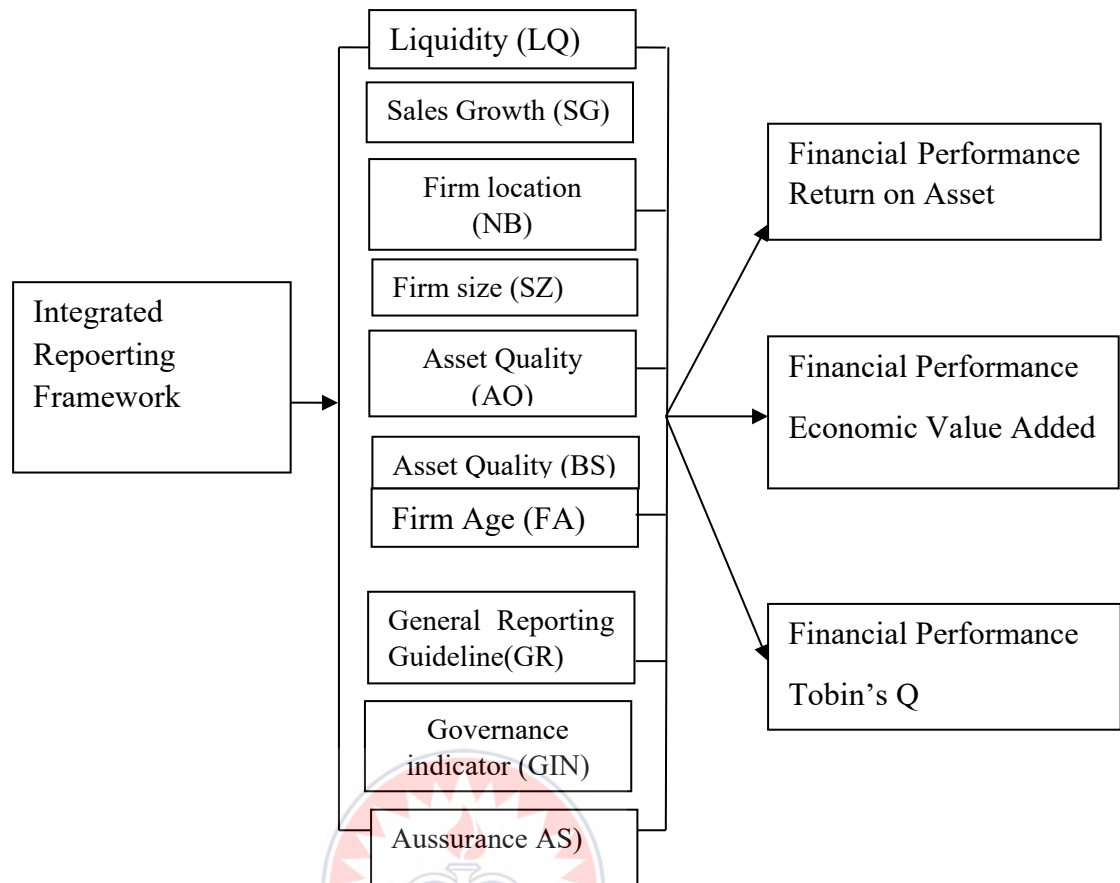
Figure 2.1 Conceptual Framework

Source: Adapted from literature (2021)

2.3.1 Narration to the Conceptual Framework

2.3.1.1 Firm Size

To the present date, firm size remains a poorly defined concept. Where the use of size is required by theory, empirical studies typically revert to some proxy or other, such as the number of employees, Total Assets, Sales or Market Capitalization. Conversely, the concept of firm size has also been used to proxy for numerous theoretical constructs ranging from risk to liquidity or even political costs (Ball and Foster, 1982). As a result, firm size has been interpreted in many different ways, 'allowing it to explain everything, and thus nothing, at the same time' (Bujaki and

Richardson, 1997). According to Olawale (2017), there is a significant relationship between firm size and financial performance. Nzioka (2013) studied 43 commercial banks in Kenya. The study measured firm size using net assets employed and Return on Assets (ROA) to measure financial performance. The data were analyzed using correlation and regression statistics, and his findings indicated a positive relationship between firm size (net assets) and financial performance (ROA).

2.3.1.2 Firm Age

There is extensive literature suggesting a negative relationship between firm age and growth rates. It has been documented that young firms have higher average growth rates provided they survive (Ouimet & Zarutkskie 2014). Studies suggest that as firms get older, investors' uncertainty and the variability of stock returns tend to decrease (Adams, Almeida & Ferreira 2005; Cheng 2008; Pastor and Veronesi 2013). Again, a study by Ghafoorifard, Sheykh, Shakibaee & Joshaghan (2014) provided evidence to the country. The authors analyzed the relationship between firm size, age and Tobin's Q ratio. A positive relationship between firm age and profitability was also documented by Kipeshba (2013) for microfinance institutions in Tanzania and by Osunsan, Nowak, Mabonga, Pule, Kibirige & Baliruno (2015) for SMEs in Uganda. Lastly, Elif Akben-Selcuk (2016) investigated whether firm age affects profitability, evidence from Turkey. The study measured the firm age by the number of years elapsed since the firm was listed (plus one to avoid ages of zero), and this has been used by many studies (e.g. Loderer & Waelchi 2010, Fama & French 2004, Chun, Kim, Morck & Yeung 2008). The results revealed a negative and convex relationship between firm age and profitability measured by return on assets, equity, or gross profit margin.

2.3.1.3 Firm Location

Rekha, Zaheer & Pervaiz, 2018 examined the location effects on firm performance (sales, employment and market value) by analyzing geographical and technological proximities in the U.S. medical device industry. The findings indicate that the geographical and technological proximity in itself does not affect performance. In contrast, the spatially-mediated technological proximity, characterized by the technological proximity within a cluster, positively influences the performance of medical device firms.

David & Drik, 2004 examined the impact of firm location on firm growth. They used an industry-specific dummy variable KIS (short for the knowledge-intensive sector), which takes a value of 1 if the firm belongs to an industry with an above-average share of knowledge workers in its labour force and a value of 0 otherwise. They also used several region-specific measures reflecting the knowledge resources and other spillover sources of the region, including a dummy variable for regions with a skilled labour force share in the highest 20 per cent (HUMAN CAPITAL), the amount of employment in the region accounted for by Neuer Markt firms (NM-EMPLOY), a dummy variable for the presence of venture capital in the region (V.C.), and the high technology start-up rate of the region (GRINTST). In addition, a dummy variable for firms with a location in one of the five new eastern states (former East Germany) is also included (DOST). The results of this paper suggest that it is helpful to bring these two kinds of literature together. As measured by growth, firm performance does appear to be influenced by locational characteristics and characteristics specific to the firm and the industry. In particular, the empirical evidence suggests that being located in an agglomeration rich in knowledge resources is more conducive to firm growth than being in a region less

28

endowed with knowledge resources. These results suggest the economic value of the location as a mechanism for accessing external knowledge resources, which in turn, manifests itself in higher rates of growth.

2.3.1.4 Corporate Governance

Gompers & Metrick (2003) found a strong correlation between corporate governance and stock returns throughout 1990, and firm value, as measured by Tobin's Q. Brown and Caylor (2004), found that companies that are managed better would be more profitable, more valuable, and to pay more cash dividends to shareholders. Zahroh & Hamidah (2016) research on the role of corporate governance in firm performance. The independent variables were corporate governance mechanism and Corporate Governance Perception Index (CGPI). Corporate governance mechanisms include several boards of directors (Boze), number of independent board (BoInd), number of outside directors (OutDir), number of the audit committee (AcSize), frequency of audit committee meetings in a year (AcMeet), and audit quality (Audit). The examination of the influence of corporate governance on firm performance was done by multiple regression test. This study indicated that board independence negatively influences profitability, audit committee meetings positively influence profitability, audit quality influence profitability, CGPI positively influences profitability, leverage negatively influences profitability, and firm size negatively influences profitability.

2.3.1.5 Integrated Reporting

Ranjita & Mohammad (2018) studied MNCs in Bangladesh on adherence to the integrated reporting framework. Annual report content analysis was used; the finding shows that the companies have lately started providing non-financial

information regarding the environment, society, governance, and financial figures. Arcangelo & Lara (2019) investigated the level of alignment of an integrated report with the integrated reporting framework. Therefore, the study analyses ten elements represented by two fundamental concepts and eight content elements. This study assigns a score of 0 in the case of absence of a single element, a score of 1 if for the single element, only qualitative information was present, a score of 2 if qualitative and quantitative information was present, and, finally, a score equal to 3 in the case of the presence of qualitative, quantitative and monetary information. Therefore, the maximum score for every element is three, and every integrated report can assume a maximum score of alignment with the I.R. framework equal to 30. The results show a positive and significant association between firm size and the level of alignment with the I.R. framework. The results also show a positive and significant association between the industry environmental sensitivity (IES) and the level of alignment with the I.R. framework.
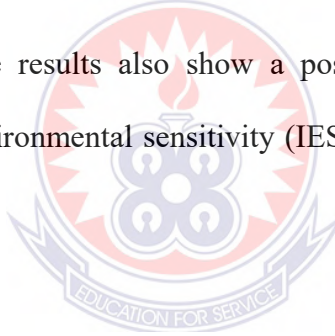
CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter presents the research methodology that will be applied in the study. This includes the research design that will be applied, the target population for the study and the sampling procedures used, the sample size, data collection procedures, and data analysis techniques that will be applied.

3.1 Research design

According to Collis and Hussey (2019), "a research paradigm is a philosophical framework that guides how scientific research should be conducted, based on people's philosophies and their assumptions about the world and the nature of knowledge." The research paradigm of this study is positivism. The Positivist paradigm is associated with quantitative analysis methods because this paradigm assumes that the phenomena under study can be measured. Positivism is concerned with uncovering truth and presenting it empirically (Henning, Van Rensburg & Smit, 2014). According to Lincoln & Guba (2015), researchers from the positivism perspective explain how variables interact, shape events, and cause outcomes in quantitative terms. Multivariate analysis and techniques for statistical prediction are among the classic contributions of this type of research (Neuman, 2013).

In relation to the research approach, the study adopted the quantitative approach because Cooper and Schindler (2017) explained that quantitative research methodology relates to numbers and measuring of observed facts. They also argue that quantitative research methodology permits specification of dependents variable and allows for longitudinal measures of subsequent performance of the research

31

subject. The method is compatible with the study because it allows the research problem to be conducted in very specific and set terms. Besides, the approach plainly and distinctively specifies both the independent and the dependent variables under investigation. It also follows the original set of research goals, arriving at a more objective conclusion, testing hypothesis, determining the issues of causality, and eliminating or minimising subjectivity of judgments.

Bui (2019) posits that research can be categorised into exploratory, descriptive and causal. Exploratory research is conducted to obtain a better understanding on issues that the research problem revolve around, while descriptive research tries to describe the features of a phenomenon. Causal research is used to identify the causes and effect relationships between the main variable under study. From this backdrop, this study adopts the descriptive and causal research designs because it uses descriptive content analysis in providing answers to the first research objective, which seeks to identify the degree of adherence to the integrated reporting framework. The second and third objectives sought to explain the cause-and-effect relationships between the factors that account for the integrated reporting framework and how integrated reporting framework affects the firms' profitability.

3.2 Population

The population of a study is the total or the entire number of the unit studied. The target population is all the manufacturing companies listed on the Ghana Stock Exchange between 2014 to 2020. This is because listed companies in Ghana started presenting integrated reports from 2014. For this reason, the population for the study was ten listed manufacturing companies.

3.3 Sample techniques and sample size

Omirin (2008) defines sampling technique as the techniques employed to select a population's sample size. The sampling technique selected for this study was the census sampling technique since all the ten listed manufacturing companies between 2014 to 2020 were considered for the study.

3.4 Source of data

This study involved only secondary data, specifically the financial statement of manufacturing companies between the periods of 2014 to 2020. According to Bui (2019), the secondary data are comprised of survey-based data, documentary data, and those compiled from multiple sources. The survey-based data describes data, which has been collected through survey strategies, such as the use of questionnaires. Therefore, survey-based secondary data is useful for studies that require data that has already been collected for similar studies. Documentary data comprises memos, news, reports and administrative correspondence that hold critical information for the study. On the other hand, Cheng, Chien and Liu (2010) mentioned that multiple-source secondary data relates to data collected through the combination of survey-based data and documentary data. Three reasons informed the choice for secondary data for the study. Firstly, the data required for the study could not be procured through a primary source because the data holders were not willing to release the data. Secondly, the financial performance data of most companies can be obtained from their published financial statements, which offers a basis for their analysis. Finally, an authentic overview of the integrated reporting of a given company emanates from the appropriate content analysis, which can only be obtained from the financial statement for a given period.

3.5 Measurement of Variables

The selected variables (financial ratios and accounting figures) will be obtained from the companies' balance sheets and income statements in this study. The selected variables included ratios related to companies' earnings, firm size, firm location, firm age, corporate governance and IR. Measurement of each of the variables is discussed below.

3.5.1 Financial performance Variables

Three variables, namely, return on asset (ROA), economic value added (EVA), and Tobin's Q, were used to measure the financial performance (firm earnings) of the manufactures in this study. According to Watson and Head (2010), these ratios are measures used to determine the extent to which a particular institution is performing in relation to the ability of that institution to generate revenue from its operational activities and what the institution is doing with investor's hard earned money. It also finds out whether companies have been able to create (or destroy) shareholders wealth. EVA is regarded as a mirror reflection of an organization's true performance.

3.5.1.1 Return on Asset (ROA)

Return on asset (ROA) will be estimated as the ratio of net income that is after-tax profit to total asset. This ratio measures after-tax profit per cedi of assets. It is also called return on investment (ROI).

3.5.1.2 Economic Value Added (EVA)

EVA assesses the performance of a company and its management through the idea that a business is only profitable when it creates wealth and returns for shareholders, thus requiring performance above a company's cost of capital.

Economic Value Added is estimated as (EVA = Net Operating Profit After Tax (NOPAT) – Weighted Average Cost of Capital (WACC) × Operating Asset.

3.5.1.3 Tobin's Q (TQ)

Tobin's Q represents market performance. In computing the Tobin Q for a period, The researcher used the market value of equity three months after the firms' financial years. This is necessary considering that the companies Act, in effect, gives a three-month grace period, after the end of a financial year, to companies to publish their audited statements. Thus, public reaction to the financial statements is expected after the three months when the financial statements have been published. Tobin's Q $_{(t+3months)}$ = (MVE$_{(t+3months)}$ + book value of long-term debts) / Netbook value of net assets x 100%

Where MVE$_{(t+3)}$ is the market value of equity three months after the end of the financial year.

3.5.2 Measurement of Determinants of Performance of manufactures

3.5.2.1 Integrated reporting framework (IFR)

The first independent variable of this study is represented by the degree of adherence of IR of manufacturing companies with the <IR> Framework (IRF). To determine the degree of integrated reporting practice by the selected manufacturing companies, the researcher used the "frequency of disclosure" as the unit of analysis. This particularly focused on the presence or absence of disclosures as required by the integrated reporting framework. If a company disclosed particular reporting information, it was assigned a score of 1, otherwise 0. To determine the integrated reporting practice of the selected companies and find out the presence of information

in the annual reports as required by the IIRC Framework, a unique "Integrated Reporting Disclosure Index (IRDI)" was developed.

The study used this approach by assigning a score of 1 if the company disclosed a certain item at least once and 0 otherwise. Hence, a company received a score ranging from 0 to 50, depending upon the number of items disclosed. The IRS was calculated by dividing the items disclosed to a maximum number of items that a firm could disclose. The IRS is mathematically represented as:

$$IRS = \frac{\sum_{i=1}^{t} IR}{t}$$

where: IRi = 0 or 1, as follows: IRi = 0 if the disclosure item was not found; IRi = 1 if the disclosure item was found; and t = the maximum number of integrated reporting disclosure items a firm could disclose (i.e. 50 items).

3.5.2.2 Firm size (FS)

Size has been viewed as a determinant of a firm's adherence to integrated reporting framework and performance (Gadzo, Kportorgbi & Gatsi, 2019). Larger firms tend to be more diversified and hence have a lower variance of earnings, making them able to report according to the integrated reporting framework. On the other hand, small firms may find it relatively more costly to resolve information asymmetric with lenders, thus presenting a lower adherence level (Saad, 2010). In this study, firm size has been taken as the logarithm of the total asset of the manufacturing companies. The use of logarithm enables us to obtain the real total asset of the firms due to its capabilities to standardize values, thus bringing them on the same platform for more efficient analysis.

3.5.2.3 Firm location (BS)

The following researchers (Mohd & Esuh, 2011; Hashim, 2005; Kuratko & Hodgett, 2004; Esteban, Yancy & Christian, 2010 and David & Drik, 2004) agreed to the fact that firm location influences firm performance. They concluded that most companies within the developed cities and regional and country capitals get assessed to the most skilled, knowledge and excellent personnel to employed. The most advantageous factor of their findings was that these firms within the regional capitals have large numbers of customers to patronize their products and services, leading to high sales volume and, therefore, affecting profitability. This study assigns a score of 1 for manufacturing companies within the regional capital and cities with 50,000 population and a score of 0 for otherwise.

3.5.2.4 Corporate governance Index (GIN)

This study also examines the effect of corporate governance on firm performance. The measure of corporate governance is corporate governance mechanism and Corporate Governance Perception Index (GIN). Corporate governance mechanisms are board size, board independence, outside directors, audit committee size, audit committee meeting, audit quality, and GIN.

3.5.2.5 Firm age (FA)

The age of the firm estimates how old the manufacturing has been in existence since its establishment. It is used as a controlling variable because the researcher can segregate the integrated reporting framework of the companies that have been in operational existence for longer than those joining the industry. This clearly explains the effect of the adherence of the integrated reporting framework of old and young

manufacturing companies on their financial performance. Estimation; Age of a firm = Year of study – date of establishment

3.5.2.6 Liquidity (LQ)

Deesomsak et al. (2004) used the ratio of current assets to current liabilities to measure liquidity in selected Asia countries. The result showed a negative relation with leverage. Among the studies that used the ratio of current assets over current liabilities to denote liquidity are studies done by Bhole and Mahakud (2004), Krenusz (2004) and Antoniou et el. (2002). This study also defines liquidity as the ratio of current assets over current liabilities in line with the literature.

3.5.2.7 Sales Growth (SG)

Asimakopoulos, Samitas and Papadogonas (2009) argued that firms with high growth would capture relatively higher debt ratios hence may not present integrated reports. Abu - Rub (2012) argues that firms with growth opportunities will have smaller adherence to the integrated reporting framework.

3.5.2.8 Asset Quality (AQ)

This is the ratio of carrying values of the assets to the total net profit of the manufacturing companies. It indicates how much of the total portfolio has been provided for but not charged off and is used as a measure of the firm's asset quality and risk.

3.5.2.9 Assurance (AS)

Assurance: The provision of assurance improves environmental and social information (Hodge et al., 2009). The assurance provided by non-financial information also enhances the perceived sustainability performance for professional

38

investors and results in higher investment willingness (Reimsbach et al., 2017). Regarding this variable, Rivera-Arrubla et al. (2017) found that reports' assurance (external verification) positively impacts the level of disclosures within integrated reports. For the measurement, 1 if a firm obtains assurance on stand-alone sustainability report, 0 otherwise

3.5.2.10 Sustainability index (BS)

Kinder, Lydenberg, Domini and Co. initiated the trend of creating sustainability indices with the Domini 400 Social Index launch in the 1990s (Orsato et al., 2015). In 1999, the New York Stock Exchange launched the Dow Jones Sustainability Index (Orsato et al., 2015). The first sustainability index in an emerging market, South Africa, has grown into the Johannesburg Stock Exchange (JSE). A socially Responsible Investment Index (JSE SRII) was launched in 2004 (De Souza Cunha and Samanez, 2013). In 2014, BIST launched the BIST Sustainability Index, the first sustainability index of Turkey. 1 if a firm produces a stand-alone sustainability report, 0 otherwise

3.5.3 Estimation Technique

Unlike the normal pooled ordinary Least Squares (OLS) regression, Panel data regression techniques consider the various biases and other disturbances that may come up in the regression analyses by controlling the unspecified differences among firm-specific variables that are not easily incorporated in practice. The study employs the panel data model below:

$$U_{it} = \alpha_i + \theta_t + \beta X_{jit} + \varepsilon_{it} \tag{1}$$

α denotes heterogeneous cross-sectional effect, time-invariant, θ is the individual heterogeneity effect, X_{jit} represents a vector of explanatory variables, 1 represent the

ith determinants of financial performance, j is the number of independent variables, t is the year. ε captures the unobserved time-specific effect and is the idiosyncratic error term. Since our analysis involves panel data, using the ordinary least squares (OLS) method would result in ignoring the differences between different determinants of financial performance. This would have made it impossible to determine the direction of error, giving rise to heterogeneity bias. The study, therefore, employed the fixed effects and random effects model in its estimation. However, the major problem is selecting between the Fixed Effect (FE) and the Random Effect (RE) models. The FE model allows for arbitrary dependence between the unobserved effect and the explanatory variables Xit (Wooldridge, 2010); hence they become fixed parameters to be estimated. Here we transform the dependent and independent variables and then apply OLS to the transformed data to obtain the estimator. The FE model alters the estimating equation to eliminate the fixed effects (Baltagi, 2008).

Under a random effect model, the unobserved effects θ s are assumed to be random, and the estimation procedure used is the generalized least squares (GLS). The GLS uses cross-section weights for every observed determinant of financial performance at time t and the true variance elements to produce a matrix-weighted average of the within and between, which is gotten by regressing the cross-section averages across time estimators (Baltagi, 2008; Greene, 2008). However, it is important to mention that both the fixed and random effect models assume that the errors are independently and identically distributed. This suggests the absence of heteroskedasticity and auto-correlation. When this assumption is violated, these models will yield inefficient or invalid estimates. Relaxing the assumption of independently and identically distributed residuals, this estimator produces robust standard errors if the residuals are correlated within uncorrelated be- tween clusters, giving rise to heteroskedasticity

autocorrelation consistent estimates. In addition, estimates from the traditional Hausman specification tests are also invalid in the presence of spatial correlation. Driscoll and Kraay (1998) consequently proposed a model with residuals that are robust to a very general form of cross-sectional and temporal dependence.

3.5.4 Model specification

The theoretical and empirical literature on integrated reporting framework in finance has identified a vector of variables that influence it and firm financial performance, including debt, disintegrated into short-term debt, long term debt, and total debt. The relationship between debt and manufacturing companies financial performance in Ghana is thus estimated in the following regression models: The examination of the determinants of integrated reporting framework is done by multiple regression test:

$$IRF_{it} = \alpha_0 + \beta_1 LQ_{i,t} + \beta_2 SG_{it} + \beta_3 SR_{it} + \beta_4 SZ_{it} + \beta_5 NB_{it} + \beta_6 AQ_{it} + \beta_7 BS_{it} + \beta_8 FA_{it} + \beta_9 GR_{it} + \beta_{10} AS_{it} + \varepsilon_{it}$$

$$(2)$$

For the examination of the effect of integrated reporting framework on financial performance, three performance indicators were used namely ROA, EVA and TQ is done by multiple regression test:

$$ROA_{it} = \alpha_0 + \beta_1 LQ_{i,t} + \beta_2 SG_{it} + \beta_3 SZ_{it} + \beta_4 NB_{it} + \beta_5 AQ_{it} + \beta_6 BS_{it} + \beta_7 FA_{it} + \beta_8 GR_{it} + \beta_9 GIN_{it} + \beta_{10} IRF_{it} + \varepsilon_{it}$$

$$(3)$$

$$EVA_{it} = \alpha_0 + \beta_1 LQ_{i,t} + \beta_2 SG_{it} + \beta_3 SZ_{it} + \beta_4 NB_{it} + \beta_5 AQ_{it} + \beta_6 BS_{it} + \beta_7 FA_{it} + \beta_8 GR_{it} + \beta_9 GIN_{it} + \beta_{10} IRF_{it} + \beta_{11} AS_{it} + \varepsilon_{it}$$

$$(4)$$

41

$$TQ_{it} = \alpha_0 + \beta_1 LQ_{i,t} + \beta_2 SG_{it} + \beta_3 SZit + \beta_4 NB_{it} + \beta_5 AQ_{it} + \beta_6 BS_{it} + \beta_7 FA_{it} + \beta_8 GR_{it} + \beta_9 GIN_{it} + \beta_{10} IRF_{it} + \beta_{11} AS_{it} + \beta_{11} ROA_{it} \; \varepsilon_{it}$$

(5)

3.5.5 Estimation method

Park (2019) opined that estimation of panel data models using pooled ordinary least squares yields inconsistent estimators and heteroskedasticity errors. The researcher further stated that if the parameters to be estimated vary across firms, the pooled regression is not appropriate because the heterogeneity in the parameter as an estimate is not well dealt with. From a theoretical perspective, Baltagi (2015) explained that overlooking such stricture heterogeneity among cross-sectional and time-series could lead to inconsistent estimates of interesting parameters. Baltagi (2015) noted that using a panel data model is appropriate to correct this problem. According to the researcher, panel estimation methods, including fixed and random effects, are commonly used to estimate consistent heteroskedastic estimators. Park (2019) further stated the basic differences between the estimation as mentioned above technique was based on the assumption about the relationship between the error term and the covariates. The choice of the estimation process is informed by the deficiencies with pooled ordinary least squares.

Using panel data to estimate models requires determining whether there is a correlation between the unobservable heterogeneity in each firm and the explanatory variables of the model. If the final outcome results in a fixed effect correlation, consistent estimation would be obtained by means of the group estimation. Otherwise, random effects are more appropriate estimator that can be achieved by estimating the equation by cross-section generalized least squares (Park, 2019). The usual econometrics strategy to determine whether the effects are fixed or random is to use

the Hausman (1978) test under the null hypothesis. If the null hypothesis is rejected, the effects are measured to be fixed, and OLS then estimates the model. If the null hypothesis is accepted, we would have random effects, and the model is then estimated by GLS. In this way, we achieve a more efficient estimator of $β$, and the estimated model can be said to be robust, all else equal. But because some of the independent variables might have multicollinearity, the ordinary ridge regression is used in the study. Park (2019) indicated that ordinary ridge regression (ORR) is used to correct the multicollinearity problem though it has the problem of shrinking the estimates toward zero.

3.6 Data processing and analysis procedures

The study uses annual report content analysis and disclosure index techniques to answer the first and the second objectives of the research: (1) find out the integrated reporting practices by the manufacturing companies in Ghana and (2) What is the degree at which the manufacturing companies are adhering to the IRF. Scholars and academics use content analysis technique in corporate disclosure studies (Mirfazli, 2008; Thompson & Zakaria, 2004; Vuontisjärvi, 2006; Vurro & Perrini, 2011), environmental data (Parker, 2005 & Beattie & Thomson, 2007) or while doing sustainability research (Azcárate, Carrasco, & Fernández, 2011). There are several techniques available to do a content analysis of annual report disclosures, the most common being used include word counts (Campbell, 2003; Deegan, & Gordon, 1996; Azizul & Deegan, 2008), sentence counts (Buhr, 1998; Hackston & Milne, 1996), page proportions (Unerman, 2000 & Gray & Lavers, 1995), frequency of disclosure (Cowen, Ferreri, & Parker, 1987; Ness & Mirza, 1991; Kamal & Deegan, 2013; Mohammad & Ranjita, 2018) and high/low disclosure ratings (Patten, 1991). To

determine the degree of integrated reporting practice by the selected manufacturing companies, the researcher used the "frequency of disclosure" as the unit of analysis.

The researcher used the annual reports of the selected manufacturing companies from the Ghana Stock Exchange (GSE) for doing content analysis. As of the 30th June 2021, there were 37 listed companies in the GSE and out of it, ten (10) are manufacturing companies, and all ten have been selected. The ten companies that have been selected are Guinness Ghana Breweries Ltd. (GGBL), Unilever Ghana PLC (UNIL), Benso Oil Palm Plantation Ltd. (BOPP), Aluworks Ltd (Aluworks), Cocoa Processing Company (CPC), Danex Ayton Starwin plc (DASPHARMA), Fan Milk (FML), Ghana Oil Company Ltd (GOIL), Sam Wood Ltd (SWL) and Tullow Oil Plc (TLW). The annual reports of the years 2014-2020 were analyzed. Thus, a total of 70 annual reports were collected and analyzed. The research focuses on the listed manufacturing companies in Ghana as their annual reports are publicly available. Companies might provide Environmental, Social and Governance (ESG) information somewhere other than their annual reports like sustainability reports, company brochures, and Websites. But as Integrated Reporting demands the inclusion of such non-financial information into the annual reports by linking it with the financial information, the annual reports of the selected companies were analyzed to find out the degree of the integrated reporting practices they are adhering to.

This particularly focused on the presence or absence of disclosures as required by the integrated reporting framework. If a company disclosed particular reporting information, it was assigned a score of 1, otherwise 0. To determine the integrated reporting practice of the selected companies and find out the presence of information in the annual reports as required by the IIRC Framework, a unique "Integrated Reporting Disclosure Index (IRDI)" was developed. This development was required

as no such disclosure index is known to exist. As published by the IIRC, the Integrated Reporting Framework has been used as a reference to develop the disclosure index.

The IRDI was developed to examine the integrated reporting practice of the selected companies over the chosen period. The IRDI has 50 environmental, social and governance issues under ten general heads: Organizational Overview, External Environment, Governance, Business Model, Risks & Opportunities, Strategy & Resource Allocation, Performance, Outlook, Basis of Preparation & Presentation and General Reporting Guidance. Appendix A contains the detailed index.

To organize and analyze data for Integrated Reporting related disclosure practices, 4 Ms Excel Spreadsheets have been used. The first sheet provides a tally of years against a company and disclosure item in which the disclosure was made. As there are 50 specific items in the index, keywords were used to find out whether the related disclosure has been made. Examples of keywords used to find disclosures are Mission, Vision, Culture, Stakeholder Interest, Economic Stability, Leadership Structure, Risk Management, Capital, Uniqueness, Strategy, KPI, Challenges, Opportunities, Targets and Timeframe. Once it was found that an issue had been disclosed, the full sentence was read to find out if it was related to the disclosure practice. Therefore, the first XLS provides the total number of disclosures in terms of years by the sample companies.

Then a second spreadsheet was used to find out disclosures made in a year; this provided the total number of disclosures made by each company in a single year (Appendix B). The third spreadsheet provides the number of disclosures of each IRDI item per year. This has been provided in Appendix C. The fourth spreadsheet summarizes the data by categorizing it into ten broad heads noted above (Appendix

45

D). Appendix E provides the amount of integrated reporting disclosure in terms of percentage over the years. The research concentrates only on texts and in which part of the annual report has been disclosed and elected to ignore pictures and graphs as a medium of disclosure. The study also adopted panel data regression techniques to estimate the effect of integrated reporting on earnings to confirm the existence of a long-run relationship between IRF and corporate earning

3.7 Summary

This section of the study described how the research was undertaken. It started with the research design, of which the casual design was settled for the study. The population and its respective sampling size were also described, after which how the variables were measured also followed suit. The section ended with the measurement and estimation models used for the study.
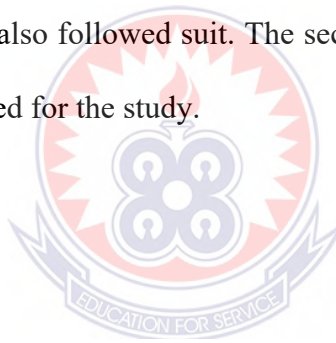
CHAPTER FOUR

RESULTS AND DISCUSSION

4.0 Introduction

This chapter presents the analysis of the data gathered and a discussion of the results. The chapter entails the descriptive analysis of the summary statistics of the data, content analysis of the annual reports of the related companies that present the disclosure levels of the selected manufacturing companies regarding the integrated reporting index. It also includes correlation analysis and the presentation and discussion of the regression results and findings.

4.1 Descriptive statistics

This section of the study presents the descriptive statistics of the variables used for the study. The descriptive statistics reflect the average percentage of the companies that report on IRF (mean), the maximum and minimum, the standard deviation, kurtosis, and the variables' skewness.

From Table 2 below, it can be seen that the skewness and kurtosis of these variables are very low. From Table 2, Integrated Reporting Framework is negatively skewed but close to zero, indicating a considerable variance between 0.38 and 0.76. It also shows that most of the listed manufacturing companies integrated reporting is relatively equal to 61%. This shows that the selected manufacturing companies' financial reports reflect an average of 61% of the integrated reporting framework. However, these selected companies' minimum and maximum reporting disclosure reflecting Integrated Reporting Framework is 38% and 76%, respectively. The findings of this paper clearly show that there is room for improvement for the companies to provide a more holistic picture of their company by incorporating

47

essential non-financial information in their annual reports along with the financial figures.

Return on Assets is negatively skewed, indicating that the majority of the firms have their equity below the market average of 4% with a standard deviation of 0.12. Standard deviation among the variables are not high except EVA (4.12) and FA (14.33), which shows that the data is not widely spread; this creates no fear of outliers and assumes it is normally distributed.

Table 2: Descriptive Statistics

	Mean	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis	Observations
IRF	0.61	0.76	0.38	0.10	-0.57	2.84	70
ROA	0.04	0.34	-0.42	0.12	-0.37	5.63	70
TQ	1.57	2.40	0.89	0.46	0.18	1.75	70
EVA	0.90	18.79	-16.03	4.12	0.57	10.52	70
AQ	0.19	0.31	-0.01	0.09	-0.66	2.50	70
AS	0.83	1.00	0.00	0.38	-1.74	4.04	70
BS	9.50	14.00	6.00	2.26	0.29	1.95	70
FA	38.83	61.00	13.00	14.33	0.05	1.81	70
GIN	3.59	4.45	0.88	1.01	-1.61	4.63	70
GR	4.17	5.00	3.00	0.76	-0.29	1.80	70
LQ	0.65	0.99	0.35	0.13	-0.08	2.70	70
NB	1.18	2.19	0.48	0.38	1.13	3.80	70
SG	0.12	0.20	0.05	0.03	0.05	2.62	70
SR	0.96	2.00	0.00	0.77	0.07	1.72	70
SZ	8.54	9.28	7.84	0.33	0.27	2.58	70

Source: Financial Statements of list Manufacturing firms (2014 -2020)

Objective 1: The level of adherence to the integrated reporting framework.

4.2 Content Analysis (Company Disclosure)

This section of the study analyses adherence to the integrated reporting framework of ten selected manufacturing companies on the Ghana Stock Exchange from 2014 to 2020. The data on the level of adherence to the integrated reporting framework reflects the percentage of items in the content elements established by IIRC, been disclosed by these selected companies. The results in this section clearly show whether the selected manufacturing companies are truly adhering to IRF or not.

Table 3 below presents the disclosure levels of the companies regarding the integrated reporting index.

4.2.1 Organizational overview

The most disclosed items in the category of organization overview included "ownership and operating structure", "disclosure on company's principal activities", and "key quantitative information on employees", which were 91.43, 91.43 and 90 per cent respectively. Nevertheless, the "company's vision" (11.43 per cent), "company's mission" (31.43 per cent) and "Information on company's value chain" (48.57 per cent) tended to be the least disclosed items relating to this category.

4.2.2 External Environment

The results revealed that most manufacturing companies tended to present information on the company's regulatory environment (97.14 per cent) and information on legitimate needs, interests of key stakeholders (94.29 per cent), and disclosure on impacts of environmental challenges on the company's operation. However, only 37.14 per cent of companies reported information on the effects of technological changes.

49

4.2.3 Business Model

In this category, almost all the companies reported most of the items regarding a business model. It included "information regarding the capitals of the company" (91.43 per cent), "information regarding the company's key products and services" (90 per cent) and "information regarding the uniqueness of the company" (78.57 per cent).

4.2.4 Risk and Opportunities

Most companies disclosed "internal or external risks" and "internal or external opportunities". They provided more information regarding the company's key risks and opportunities" (94.29 per cent), "steps being taken to mitigate key risks" (94.29 per cent) and the least disclosed item is "disclosure regarding value creation from opportunities".

4.2.5 Governance

The result revealed that most of the disclosed items in this category were "disclosure on company's approach to risk management" (98.57 per cent), "disclosure on regulatory requirements which influence the design of the governance structure" (95.71 per cent), as well as "information regarding specific processes used to make strategic decisions" (95.71 per cent), "information on company's leadership structure" (94.29 per cent). The least disclosed items were "information regarding the company's culture" (30 per cent) and "information regarding innovation made by the personnel charged with governance" (67.14 per cent). It clearly shows that almost every company presented the items in this category except for information regarding its culture. Information regarding innovation made by the personnel charged with governance may be due to the fear of reviewing their competitive advantage to the public.

50

4.2.6 Strategy and Resource Allocation

The results show that most of the disclosed items included "report on the linkage between the strategy and resource allocation plan", "Strategies it has in place, or intends to implement, to achieve those strategic", "the linkage between strategies and key capitals", all these items are given 62.86 per cent. The least items were "information regarding development and exploitation of intellectual capital" and "understanding of the organisation's ability to adapt to change to achieve goals", given 32.86 per cent each.

4.2.7 Performance

As the results show, most companies disclosed key performance indicators that present financial measures and linkages between past and current performance; moreover, 91.43 per cent of the companies revealed KPIs were combing financial measures with non-financial components (i.e. the ratio of greenhouse gas emissions to sales). From these findings, it can be inferred that traditional company reports present financial and non-financial measures separately and do not include information on interconnections between them. The result is in accordance with Ballou, Grenier and Heitger (2012), Clatton, Rogerson and Rampedi (2015) and Robertson and Samy (2015). Although not dealing specifically with integrated reporting, Ballou, Grenier and Heitger (2012) determined that organisations are more likely to disclose their sustainability initiative separately from their financial reports.

4.2.8 Outlook

The findings of the researcher revealed that 93.88 per cent of the entities disclosed information regarding future outlooks. While 98.57 per cent of the entities reported information regarding legal or regulatory requirements to which the company

is subject and the linkages between current performance and the organization's outlook. Most were hesitant to disclose the company's challenges and uncertainties and company-specific risks and expectations. Only 92.86 per cent related to those forecasts.

4.2.9 Basis of preparation and presentation

The results revealed that every company disclosed their process used to determine materiality, the description of the reporting boundary, the key judgement made and the method used to quantify or evaluate material matters (100 per cent).

4.2.10 General reporting guideline

Under this category, the results revealed that every company disclosed their comparative information for a prior period (100 per cent). 98.57 per cent of the entities disclosed information based on timeframe (short, medium and long term) and information displays connectivity between financial information and other information. The least item disclosed is the disclosure on significant variations from targets (41.43 per cent).

Table 3: Company disclosures

Disclosure item		N	(%)
Organizational Overview			61.61
OR1	Company's mission	22	31.43
OR2	Company's vision	8	11.43
OR3	Information on company's culture, ethics and values	46	65.71
OR4	Information on ownership structure	64	91.43
OR5	Disclosure on company's principal activities	64	91.43
OR6	Reports on market positioning	44	62.86
OR7	Information on company's value chain	34	48.57
OR8	Key quantitative information on employees	63	90.00
External Environment			72.62
OE1	Information on legitimate needs and interests of key stakeholders	66	94.29
OE2	Disclosure on economic stability	51	72.86
OE3	Information on effects of technological changes	26	37.14
OE4	Disclosure on impacts of environmental challenges on company's operation	57	81.43
OE5	Information on company's regulatory environment	68	97.14
OE6	Information on political environment which affects the operations of the company	37	52.86
Governance			77.43
GO1	Information on company's leadership structure	66	94.29
GO2	Disclosure on regulatory requirements which influence the design of the governance structure	67	95.71
GO3	Information regarding specific processes used to make strategic decisions	67	95.71
GO4	Information regarding the company's culture	21	30.00
GO5	Disclosure on company's approach to risk management	69	98.57
GO6	Information regarding innovation made by the personnel charged with governance	47	67.14
Business Model			69.64
BM1	Information regarding the capitals of the company	64	91.43
BM2	Information regarding the uniqueness of the company	55	78.57
BM3	Information regarding company's key products and services	63	90.00
Risks & Opportunities			91.90
RO1	Information regarding company's key risks and opportunities	66	94.29
RO2	Disclosure regarding specific steps being taken to mitigate key risks	66	94.29
RO3	Disclosure regarding value creation from opportunities	61	87.14
Strategy & Resource Allocation			40.95

SR1	Report on the linkage between the strategy and resource allocation plan	44	62.86
SR2	Information regarding development and exploitation of intellectual capital	23	32.86
SR3	Strategies it has in place, or intends to implement, to achieve those strategic	44	62.86
SR4	The measurement of achievements and target outcomes	23	32.86
SR5	The link between strategies and key capitals	44	62.86
SR6	An understanding of the organization's ability to adapt to change to achieve goals	23	32.86
Performance			86.90
PR1	Disclosure regarding key performance indicators (KPIs)	59	84.29
PR2	KPIs that present financial measures	60	85.71
PR3	KPIs that combine financial measures with other components (i.e. the ratio of greenhouse gas emissions to sales)	64	91.43
PR4	The linkages between past and current performance	61	87.14
PR5	The comparison between regional/industry benchmarks	62	88.57
PR6	Financial implications of significant effects on other capitals	59	84.29
Outlook			93.88
OT1	Information regarding challenges and uncertainties that company faces	64	91.43
OT2	Information regarding strategies to respond to challenges and uncertainties	65	92.86
OT3	Information regarding legal or regulatory requirements to which the company is subject to	69	98.57
OT4	Expectations about the future or explanations about uncertainties	64	91.43
OT5	Forecast about KPIs	65	92.86
OT6	The linkages between current performance and the organization's Outlook	69	98.57
OT7	Assumptions related to those forecasts	64	91.43
Basis of Preparation & Presentation			100.00
BP1	Disclosure on the process used to determine materiality	70	100.00
BP2	Summary of the key judgments made	70	100.00
BP3	Report on the summary of significant frameworks and methods used to evaluate material matters	70	100.00
General Reporting Guideline			83.14
GR1	Providing comparative information for prior periods	70	100.00
GR2	Providing targets for future periods	54	77.14
GR3	Provided information displays connectivity between financial information and other information	69	98.57
GR4	Disclosure on significant variations from targets	29	41.43
GR5	Providing information based on timeframe (short, medium and long term)	69	98.57

Source: Financial Statements of list Manufacturing firms (2014 -2020)

4.3 Preliminary Test of Variables

This section of the study presents the preliminary test of the variables. The first part presents the multivariate analysis, which shows the correlation among the variables and the significance of their relationships. This section also presents if multicollinearity among the variables exists.
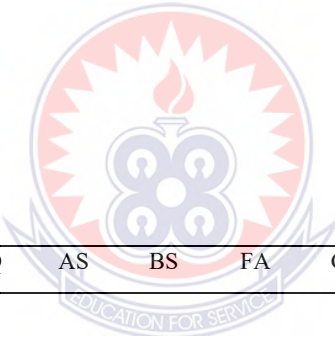
4.3.1 Multivariate Analysis

Table 4 shows the Pearson correlation analysis results. The Pearson correlation analysis was performed to find out the association among the variables in the study. The bivariate linear relationship among the variables included in the study showed that there is a positive association between integrated reporting framework with economic value added (0.19), business sustainability (0.18), general reporting guideline (0.61), liquidity (0.01), independent board of directors (0.10), sales growth (0.17), sustainability report (0.48), and firm size (0.23). It means that an increase in any of these variables will also increase IRF and vice versa. However, the correction matrix also revealed a negative association between integrated with return on asset (-0.04), Tobin Q (-0.22), audit quality (-0.36), audit firms (-0.07), firm age (-0.33) and governance index (-0.30). It means that an increase in any of these variables will cause IRF to decrease and otherwise. The correlation matrix continued to show a positive relationship between return on asset with Tobin's Q; economic value-added, audit quality, audit firms, business sustainability, firm age, governance index, sales growth, and firm size. Return on asset shows a negative association with general reporting guideline, liquidity, independent board of directors and sustainability report which means, an increase in these four variables (general reporting guideline, liquidity, independent board of directors and sustainability report) will cause return on asset to reduce and vice versa.

Table 4 is further used to assess if multicollinearity among the variables, integrated reporting framework, return on asset, Tobin's Q, economic value-added, audit quality, audit firm, business sustainability, firm age, governance index, general reporting guideline, liquidity, independent board of directors, sales growth, sustainability report and firm size. With reference to Farrar and Glauber (1967), the maximum threshold allowed ($\pm$ 0.8 or $\pm$ 0.9) to suggest the problem of multicollinearity. The highest degree co-efficient was the association between return on assets and economic value-added (0.73), which is even less than the thumb rule, according to Farrar and Glauber (1967). Therefore, the results from the correlation matrix show no multicollinearity threat due to the sample size, OLS regression analysis.

4.3.2 Correlation Matrix

Table 4: Correlation Matrix

	IRF	ROA	TQ	EVA	AQ	AS	BS	FA	GIN	GR	LQ	NB	SG	SR	SZ
IRF	1														
ROA	-0.04	1													
TQ	-0.22	0.01	1												
EVA	0.19	0.73	0.21	1											
AQ	-0.36	0.09	0.53	0.244	1										
AS	-0.07	0.21	-0.25	-0.053	-0.233	1									
BS	0.18	0.15	-0.05	0.187	0.033	-0.135	1								
FA	-0.33	0.33	0.44	0.294	0.575	-0.144	-0.032	1							
GIN	-0.30	0.04	0.61	0.096	0.501	0.051	0.034	0.330	1						
GR	0.61	-0.22	-0.42	-0.105	-0.621	-0.198	0.236	-0.689	-0.516	1					
LQ	0.01	-0.17	-0.47	-0.351	-0.511	0.196	0.037	-0.355	-0.345	0.320	1				
NB	0.10	-0.01	-0.19	-0.141	-0.452	0.029	0.007	-0.256	-0.463	0.318	0.258	1			
SG	0.17	0.02	-0.29	-0.192	-0.402	-0.045	-0.302	0.013	-0.374	0.239	0.213	0.278	1		
SR	0.48	-0.03	0.05	0.046	-0.215	0.223	0.262	-0.233	0.153	0.260	0.081	0.042	-0.179	1	
SZ	0.23	0.10	-0.34	-0.078	-0.600	0.161	0.114	-0.306	-0.420	0.449	0.202	0.760	0.233	0.179	1

Source: Financial Statements of list Manufacturing firms (2014 -2020)

4.3.3 Unit Root Test

In a regression analysis, since a linear relationship is expected to be established between the variables of concern, there is the need for a unit root test to be conducted to establish whether the variables used in the study are stationary or not stationary. For this reason, since the current research is based on panel regression, there is the need for a panel unit root tests to be designed to test the null hypothesis of a unit root for each series in a panel.

Table 5: Unit Root Test

Panel unit root test: Summary

Exogenous variables: Individual effects

User-specified lags: 1

Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross - sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-0.28	0.388	7	70
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	0.62	0.7321	7	70
ADF - Fisher Chi-square	9.54	0.7948	7	70
PP - Fisher Chi-square	24.7	0.0379	7	70

** Probabilities for Fisher tests are computed using an asymptotic Chi
-square distribution. All other tests assume asymptotic normality.

Source: Financial Statements of list Manufacturing firms (2014 -2020)

From Table 5, the Levin, Lin, and Chu (2002) panel unit root is used to analyse the stationary of the variables used in the study. It hypothesises a null hypothesis of data assuming a common stationary. This model was used because Westerlund and Breitung (2009) indicated that the local power of the Levin, Lin and

57

Chu (2002) test is greater than that of the Im, Pesaran, and Shin (2003) test, which is based on a less restrictive alternative, also when not all individual series are stationary

Since the incorporated variables in this study are not of the same order of stationary, the researcher assumed the same level of stability in the data distribution pattern: the same order of stationary for the subsequent tests. Otherwise, the long-run relationship would not be established, excluding the short-run analysis, which does not require the same order of integration.

4.3.4 The Hausman specification test

The Hausman specification test is carried out on the panel data prior to running a panel data regression to establish whether the researcher should choose the fixed effects or the random effects in the model estimation. The random-effects model assumes that there is no correlation between the random group-specific impact and the regressors. However, the fixed-effects model does not make such an assumption, and the possibility remains that the assumption of zero correlation in the random-effects model is not feasible.

As a rule of thumb, if carried out and the probability value is less than 0.05 (i.e., $p < 0.05$), then there is a correlation between the error terms and the explanatory variables, so the fixed effects are adopted in the model estimation otherwise the random effects is an inefficient estimator of the parameters under investigation. Table 6 below shows the results of the Hausman specification tests. The results for the Hausman test are as follows:

Table 6: Hausman specification test

Variables	Chi–Squ Statis	P - Values
IRF= LQ+SG+SR+SZ+NB+AQ+BS+FA+GR+AS	21.6889	0.0000
ROA=IRF+LQ+SG+SZ+NB+AQ+BS+FA+GR+GIN	29.1672	0.0000
EVA=IRF+LQ+SG+SZ+NB+AQ+BS+FA+GR+GIN+AS	22.8967	0.0001
TQ =IRF+LQ+SG+SZ+NB+AQ+BS+FA+GR+GIN+AS+ROA	19.6572	0.0003

Source: Financial Statements of list Manufacturing firms (2014 -2020)

From Table 6, the Hausman specification test, it can be observed that all the probability values in the four models are below 0.05. This implies that the random-effects model should be rejected. Thus, the analysis is based on the fixed effects estimates; therefore, it is far-sighted to use fixed effects as this approach produces more resourceful parameter estimates. Reimoo (2008) also compared the fixed-effects model with the random effects model and based their results on the fixed effects model based on the Hausman specification test.

Objective 2: Determinates of adhering to the IRF.

This section of the study sought to identify the determinants of adhering to integrated reporting framework. This result explains whether the selected control variables, liquidity, sales growth, sustainability report, firm size, independent board of directors, assets quality, business sustainability, firm age, general reporting guideline and audit firm are statistically significant to the integrated reporting framework. It also presents the extent to which each of these variables influences the integrated reporting framework.

59

Table 7: Dependent Variable: IRF

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.0227	0.3015	-0.0753	0.9424
LQ	0.1158	0.0503	2.3035	0.0248
SG	1.7631	0.3336	5.2847	0.0000
SR	0.0274	0.0090	3.0529	0.0224
SZ	0.0215	0.0399	0.5386	0.6096
NB	0.0019	0.0184	0.1047	0.9200
AQ	0.0259	0.0700	0.3702	0.7240
BS	-0.0817	0.0203	-4.0303	0.0002
FA	0.0044	0.0009	5.2296	0.0020
GR	0.0546	0.0086	6.3317	0.0007
AS	0.1129	0.0121	9.3022	0.0000
R-squared	0.9116	Mean dependent var		0.6137
Adjusted R-squared	0.8780	S.D. dependent var		0.1009
S.E. of regression	0.0353	Akaike info criterion		-3.6176
Sum squared resid	0.0621	Schwarz criterion		-2.9751
Log likelihood	146.6148	Hannan-Quinn criter.		-3.3624
F-statistic	27.1332	Durbin-Watson stat		2.1256
Prob(F-statistic)	0.0000			

Source: Financial Statements of list Manufacturing firms (2014 -2020)

From Table 7, it can be seen that the integrated reporting framework has a significant positive relationship with liquidity (t= 2.30, p< 0.05), SG (t= 5.28, p< 0.01), sales growth (t=5.28, p< 0.01), sustainability reporting (t=3.05, p< 0.05), firm age (t= 5.23, p< 0.01), general reporting guideline (t= 6.33, p< 0.01) and audit service (t= 9.30, p< 0.01). In order words, an integrated reporting framework will increase by 0.1158 (11.58%), 1.7631 (176.31%), 0.0274 (2.74%), 0.0044 (0.44%), 0.0546 (5.46%) and 0.1129 (11.29%) when there is a unit change in liquidity. sales growth, sustainability reporting, firm age, general reporting guideline, and audit service respectively.

However, the integrated reporting framework negatively affects business sustainability (t= -4.03, p< 0.01). Thus an increase in business sustainability will cause the integrated reporting framework to decrease by a unit of -0.0817 (-8.17%). When all the determinants variables of IRF are held constant, IRF equals -0.0227 (-2.27%). The mean dependent variance is 91.16%, which implies that the variables that were chosen as determinants of IRF explain it by 91.16%. There are other determinants variables of IFR that constitute 8.84%.

4.3.5 Regression Analysis

From previous discussions of the findings of this study, the relationship between the variables under study has been established. There is a need to know the determinants of integrated reporting. From Table 7 above, the coefficient of multiple determinations, R^2 and the adjusted R^2 indicates that liquidity, sales growth, sustainability report, business sustainability, firm age, general reporting guideline and audit firm are the determinants of integrated reporting framework, which constitute 91.16% of the variations in IRF. This implies that other variables outside this model account for 8.84% of the variance in the dependent variable. On the basis thereof, it may be concluded that the independent variables significantly explain 91.16 % of the variance in the integrated reporting framework.

All from the same table, the Adjusted R^2 of 91.16% explains the variation in the dependent variable that is being explained by an adjustment in the independent variable in the regression model or equation. This implies that any adjustment made in the independent variable (thus, liquidity, sales growth, sustainability report, business sustainability, firm age, general reporting guidelines and audit firm will cause a 91.16% change in the integrated reporting framework.

This is to say that liquidity, sales growth, sustainability report, business sustainability, firm age and audit firm were the key determinants of the integrated reporting framework.

Objective 3: The effect of adherence to the Integrated Reporting Framework on Profitability.

This section presents the third objective of the study, the effect of adherence to the integrated reporting framework on profitability. Thus it shows the influence IRF has on firms' profit either positively or negatively, or it has no relationship and further presents its effect on firms profitability.

Table 8 below revealed the effect IRF has on profitability using Return on Asset (ROA), Economic Value Added (EVA) and Tobin's Q as a measure of profitability. The results show no significant association between the integrated reporting framework and the three methods used in measuring profitability. Thus return on asset ($p > 0.05$), economic value added ($p > 0.05$) and Tobin's Q ($p > 0.05$). This means that whether a company adhere to IRF or not, it does not necessarily affect its profit. The table further revealed that there is a positive statistically significant relationship between return on the asset with liquidity ($p < 0.01$) and sales growth ($p < 0.01$) at a 99% confidence level. There is also a positive relationship between return on the asset with general reporting guideline ($p < 0.05$) and governance index ($p < 0.05$) at a 95% confidence level.

Table 8: Effect of IRF on Profitability

Variable	ROA Coefficient	Prob.	EVA Coefficient	Prob.	TQ Coefficient	Prob.
C	0.3058	0.0726	17.4678**	0.0011	3.2438	0.0745
IRF	-0.0395	0.6824	-0.8724	0.7543	-0.1588	0.7475
LQ	-0.1073**	0.0094	-3.7391*	0.0115	-0.3774	0.1649
SG	-0.6508**	0.0090	-50.3007**	0.0000	0.1511	0.9054
SZ	-0.0036	0.8963	-0.7003	0.2563	-0.3347	0.0538
NB	-0.0449	0.1523	-1.5048*	0.0151	0.5874**	0.0008
AQ	-0.0134	0.8716	-2.4018	0.2728	-2.0992**	0.0014
BS	0.0037	0.5273	-0.2636*	0.0419	-0.0275*	0.0642
FA	0.0049	0.2824	0.2209*	0.0306	0.0437**	0.0010
GRG	-0.0317*	0.0486	-0.7226	0.3350	-0.1254*	0.0320
GIN	-0.0286*	0.0385	-0.5339	0.0889	0.1450*	0.0278
AS			-0.7238	0.1403	-0.2803*	0.0241
ROA					0.4110	0.1954
R-squared	0.7682		0.9407		0.8835	
Adjusted R-squared	0.6802		0.9165		0.8325	
S.E. of regression	0.0771		2.4288		0.2293	
F-statistic	8.7236		38.8579		17.3258	
Prob(F-statistic)	0.0000		0.0000		0.0000	

Source: Financial Statements of list Manufacturing firms (2014 -2020)

This implies that an increase in any of these independent variables will increase the return on the asset by an average of 41.10%. Suppose a company want to increase its profitability. In that case, it, therefore, has to increase its liquidity by adding more of its assets, must also follow the seven general reporting guidelines established by IIRC (strategic focus and future orientation, connectivity of information, stakeholder relationship, materiality, conciseness, reliability and completeness and consistency and comparability) and must also ensure that its governance is at its high level of operation.

63

Again, the table shows a significant positive association between economic value-added and firm age ($p < 0.05$). This means a unit change in the independent variable firm age will increase the mean of economic value added (i.e. profitability of a company) by 0.2209 (22.09%). Moreover, there is a significant negative relationship between economic value added with liquidity ($p < 0.05$) with a coefficient of -3.739. EVA also have a negative association with sales growth ($p < 0.01$) with a coefficient of -50.3007, independent board of directors ($p < 0.05$) and coefficient of -1.5048, business sustainability ($p < 0.05$) and firm age ($p < 0.05$). Although IFR and firm size have a negative relationship with economic value-added, return on asset and Tobin Q which statistically insignificant. Tobin's Q as another method for performance measure shows a significant positive relationship with an independent board of directors ($p < 0.01$), firm age ($p < 0.01$) at a 99% confidence level and governance index ($p < 0.05$) at a 95% confidence level.

Also, the results from Table 8 shows that there exists no significant association between firm size and return on asset ($\beta = -0.0036$, $p > 0.05$); this means that the data provide no evidence to reject the null hypothesis and therefore conclude that there is no association between firm size and return on asset. Thus, firm size proves to have no significant impact on the organizational performance of manufacturing companies. In essence, holding all other variables constant, firm size induces a 0.36% adverse change in organizational performance. Thus, this result proves that when firm size is improved by 1%, it will cause manufacturing firms' profit by 0.36%.

The results from Table 8 further show a significant positive relationship between firm age and the economic value added of the companies ($\beta = 0.2209$, $p < 0.05$). Hence the firm age significantly impact the economic value added of the

companies. Thus, firm age proves to have a significant positive impact on manufacturing companies' organisational earnings listed on GSE. In essence, holding all other variables constant, firm age induces a 22.09% change in organizational performance. Thus, this result proves that when firm age is enhanced by 1%, it will cause a significant positive change in organizational performance by 22.09%. The previous results based on the data analyzed suggest that firm age impacts the performance of listed manufacturing companies. Hence, the performance of manufacturing companies is be influenced positively by firm age.

Table 8 again revealed that liquidity has a significant and negative effect on organizational performance (i.e. return on asset) (β = -0.1073, p< 0.01), hence, liquidity significantly impact organizational performance. Thus, liquidity proves to have a significant positive impact on the organizational performance of manufacturing companies. In essence, holding all other variables constant, liquidity induces a 10.73% change in organizational performance. Thus, this result proves that when liquidity is improved by 1% (i.e. current assets and cash and cash equivalent), it will cause a significant change in organizational performance by 1073%. The previous results based on the field data analyzed suggest that liquidity impacts the performance of manufacturing companies. Hence, the performance of Manufacturing companies will be influenced negatively by liquidity.

The regression results from the data analysis show that the regression model was statistically significant (F =8.724; P=.000) for predictions because it was statistically significant at a 99% confidence level. The implication is that the regression model has an overall significance and that the data gathered fits the regression model better.

4.4 Hypothetical Testing

H1: There is a relationship between adhering to integrated reporting and earnings.

From Table 8, it can be seen that integrated reporting framework has no significant effect on organizational profitability (β = -0.0395, p> 0.05); therefore, there is insufficient evidence to conclude that there is a significant relationship between IRF and earnings. Hence, the alternative hypothesis (H1) is rejected and therefore concluded that there is no significant relationship between IRF and earnings. Though the relationship between IRF is insignificant but holding all other variables constant, the integrated reporting framework negatively induces a 3.95% change in corporate profit. Thus, this result proves that when the integrated reporting framework is improved by 1%, it will cause the company's profit to decrease by 3.95%.

4.5 Discussion

This study sought to assess the degree of adherence to the integrated reporting framework and its effect on the earnings of listed manufacturing companies in Ghana. The results of the study are discussed in detail in the following sub-paragraph.

The first objective of this study sought to find out the extend of non-financial information listed manufacturing companies on GSE are disclosing. In analyzing the disclosures made by the companies in each of the content elements, it was found that the highest number of disclosure was the "basis of preparation and presentation" (100%). The second highest disclosed element was outlook information 93.88%. The next disclosed element was risk and opportunities 91.90%. Thus, most of the company's reports revealed the key risks and opportunities that affect the company's ability to create value over the short, medium, and long term. The fourth highest disclosed element was performance. 86.90% of the companies report revealed that

they had achieved their strategic objectives and outcomes in terms of effects on the capitals the organizations are likely to encounter in pursuing its strategy and potential implication for its business model and future performance. This implies that most selected manufacturing companies do well by highlighting the challenges and uncertainties the organisations are likely to encounter in pursuing their strategy and future performance. General reporting guideline was the fifth-highest disclosed element (83.14%). The sixth highest disclosed element by the companies was governance structure 77.43%. This shows how value is created in the short, medium long term. Under this category, the company's approach to risk management was seen as the most revealed by 98.57%. The findings also revealed that 72.62% of the company report disclosed the external environment element, which is the seventh-highest disclosed element, and the most item disclosed was "information company's regulatory environment (97.14%). The least item revealed was "information on effects of technological changes (37.14%). This may be the fear of reviewing their competitive advantage to others. The next content element disclosed by the companies was the business model. Thus only 69.64% of the selected companies disclosed their system of transforming inputs, through its business activities into outputs and outcomes that aims to fulfil the organisation's strategic purposes and create value over the short, medium and long term. The organizational overview was described as the ninth highest disclosed element, 61.61%. The organizational overview explains what the organization does and the circumstances under which it operates. Under the organisational overview category, the most revealed item was "information on ownership structure" (91.43%) and the "information on principal activities of the company" (91.43%). The least item disclosed under this category was the "company's vision" (11.43%) which sound very strange because it is one of the key items under

67

the organizational overview. Finally, the lowest disclosed element was strategies and resources allocation, 40.95%.

Therefore, it is evident that there is a growing trend in the disclosure of non-financial information in manufacturing companies, specifically in Ghana. The findings of this study are consistent with Islam & Rakibul (2018); their results show an increasing trend of disclosing non-financial information by the selected companies as the Integrated Reporting Framework requires. The findings reveal that the growing demand for non-financial information by the different stakeholders of multi-national companies has compelled the companies to focus and disclose more and more non-financial facts. Companies are now measuring their performance based on their impact on the environment and society. It was visible that the most extensive disclosure was made under the "Total Organizational Overview" category (192 disclosures), followed by the "Total Governance" category (167 disclosures). There were 135 disclosures on Total External Environment, 98 disclosures on Total Outlook and Total Basis of Preparation and Presentation and 92 disclosures on Total General Reporting Guidelines. 69 disclosures were made under the "Total Business Model" category, 67 disclosures under the "Total Risks & Opportunities" category. The lowest disclosures were made regarding Total Strategy and Resource Allocation.

The findings also support prior research by Maama & Appiah (2019), which found that the mining, oil and gas sector has integrated environmental sustainability information in their accounting system. Regarding the nature of green disclosure, the content analysis depicts that only positive qualitative disclosures were provided in the annual reports. However, the findings of this study are contrary to Donkor & Deborah (2017). Their study's findings revealed that accounting practitioners had little idea of

68

the concept regarding the general awareness of I.R. Another finding was that respondents could not clearly distinguish between I.R. and sustainability reporting.

The second objective was to identify the determinants of the integrated reporting framework. The study's findings revealed a significant relationship between integrated reporting framework with liquidity, sales growth, sustainability reporting, General Reporting Guideline (GRG), firm age, audit firms, and business sustainability. These variables explain the IRF by 91.16% and therefore show that other variables outside these variables constitute 8.84% that can equal be determinants of IFR. These findings are consistent with some of the findings of Merve and Cemil (2018). They assess the current company reports according to the IIRC integrated reporting framework. The authors' results revealed that current company reports mainly present generic rather than company-specific; provide positive information while dismissing negative information; present financial and non-financial initiatives separately, lack a strategic focus; and include backwards-looking rather than forward-looking information. The authors found that the IRS is significantly and positively associated with sustainability reporting, Global Reporting Initiatives (GRI) adoption, sustainability index listing and the presence of a sustainability committee.

The last objective of the study was to assess the effect of adherence to the integrated reporting framework on performance. The findings show no statistically significant association between the integrated reporting framework and the three methods used to measure profitability. Thus return on asset ($p> 0.05$), economic value added ($p> 0.05$) and Tobin's Q ($p> 0.05$). It also revealed no significant association between firm size and profitability ($p> 0.05$). This means that whether a company adhere to IRF or not, it does not necessarily affect its profit. These findings do not

support any empirical literature review, but they can be considered new findings that require more investigations.

The results also show a significantly positive association between profitability with liquidity, sales growth, general reporting guideline, governance index, audit firm, an independent board of directors, business sustainability and firm age ($p< 0.05$). This implies that an increase in any of these independent variables will increase the return on the asset by an average of 76.82%. Suppose a company want to increase its profitability, it, therefore, has to increase its liquidity by adding more of its assets, must also follow the seven general reporting guidelines established by IIRC (strategic focus and future orientation, connectivity of information, stakeholder relationship, materiality, conciseness, reliability and completeness and consistency and comparability) and must also ensure that its governance is at its high level of operation. These findings are consistent with Barth, Steve, Chen &Venter (2017); the result shows a positive association between IRQ and liquidity, which support the capital market channel. The finding also supports the findings of Dhaliwal, Radhakrishnan, Tsang &Yang, 2012; Nichols & Wieland, 2009; Orens & Lybaert, 2007; Simpson, 2010; Zhou, Simnett & Green, 2017. These studies provide evidence that analyst forecast error reduces as a company's level of alignment with the IRF increases. Also, evidence from prior literature reveals that analysts use non-financial information in their earnings forecasting.

The findings are also consistent with Olawale (2017) findings that a significant relationship exists between firm size and financial performance. Nzioka (2013) studied 43 commercial banks in Kenya. The study measured firm size using net assets employed and Return on Assets (ROA) to measure financial performance. The data were analyzed using correlation and regression statistics, and his findings

indicated a positive relationship between firm size (net assets) and financial performance (ROA).

The study's findings also show a negative relationship between firm size and profitability, though insignificant. These findings are inconsistent with the results of Ghafoorifard, Sheykh, Shakibaee & Joshaghan (2014). The authors analyzed the relationship between firm size, age and Tobin's Q ratio. A positive relationship between firm age and profitability was also documented by Kipeshba (2013) for microfinance institutions in Tanzania and by Osunsan, Nowak, Mabonga, Pule, Kibirige & Baliruno (2015) for SMEs in Uganda.

Finally, the study's findings proved a significant positive association between firm age and profitability. This result is inconsistent with Elif Akben-Selcuk (2016) investigation of whether firm age affects profitability, evidence from Turkey. The study measured the firm age by the number of years elapsed since the firm was listed (plus one to avoid ages of zero), and this has been used by many studies (e.g. Loderer & Waelchi 2010, Fama & French 2004, Chun, Kim, Morck & Yeung 2008). The results revealed a negative and convex relationship between firm age and profitability measured by return on assets, equity, or gross profit margin.

4.6 Summary of Chapter

The finding of this study has emphasized the disclosures content element, determinants of IRF, and the effect adherence to IRF has on organizational performance. However, it was also evident from the findings of the study show that the most and the highest disclosed element was the "basis of preparation and the presentation" (100 per cent). The lowest disclosed element was the "strategies and resource allocation" (40.95 per cent). The findings also show that liquidity, sales

growth, sustainability reporting, general reporting guideline, firm age, audit firm, and business sustainability are the determinants of IRF constitute 91.16%. Lastly, the findings show no significant association between IRF and firm size with profitability. Therefore, these findings serve as reference points for organizations who want their financial report to reflect the requirement of IIRF to take this approach to ensure that they are fully adhering to IRF.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This study aimed to investigate the disclosure of non-financial information of listed manufacturing companies and the effect adherence to an integrated reporting framework has on profitability. The formulated hypotheses were imperilled to statistical and inferential testing using Pearson's Product Moment Correlation and Regression Analysis to indicate the relationship between the study variables and establish the cause-effect relationship among the variables. Using the purposive sampling technique to obtain a sample size of ten (10) manufacturing companies from fifteen (15) listed manufacturing companies in Ghana was used for the analysis. The data were obtained from audited financial statements of the selected companies from the Ghana Stock Exchange website, and analyses were done with the aid of EViews version 12. The findings from the study proved that disclosure of non-financial information, especially in manufacturing companies, has significantly improved. Accordingly, the proceeding sub-sections of the study present the summary of findings, conclusions, implications for practice and recommendations.

5.1 Summary of findings

This section summarises the findings as follows. The study's first objective is to investigate the disclosure of non-financial information among manufacturing companies listed on the Ghana Stock Exchange. The study finds that there has been a significant improvement in the disclosures of non-financial information among these selected manufacturing companies. The results revealed that an average of 78.64% of non-financial information was disclosed in their financial statements. The highest

disclosed element was "basis of preparation and presentation" (100 per cent) of non-financial information, and the lowest disclosed element was 40.95%.

The second objective was to identify the determinants of the integrated reporting framework. The findings from the study show that liquidity, sales growth, sustainability reporting, audit firms, general reporting guideline, firm age and business sustainability are the determinants of the integrated reporting framework. These determinants contribute 91.16%, implying that there are other determinant variables outside these, constituting 8.84%. The study further revealed that assets quality, firm size and independent board of directors are not significant determinants of integrated reporting framework (F= 27.1332, P> 0.05).

The last objective of the study was to estimate the effect integrated reporting has on profitability. The findings show no statistically significant association between the integrated reporting framework and profitability. Thus return on asset (p> 0.05), economic value added (p> 0.05) and Tobin's Q (p> 0.05). It also revealed no significant association between firm size and profitability (p> 0.05). This means that whether a company adhere to IRF or not, it does not necessarily affect its profit.

The results also show a significantly positive association between profitability with liquidity, sales growth, general reporting guideline, governance index, audit firm, an independent board of directors, business sustainability and firm age (p< 0.05). This implies that an increase in any of these independent variables will increase the return on the asset by an average of 76.82%.

5.2 Conclusion

In summary, the findings show that preparing financial statements to reflect IRF requirements does not significantly influence manufacturing companies' profitability.

However, suppose the company want to increase its profitability. In that case, it has to focus on increasing its liquidity, sales growth, adhere to the general reporting guideline, employ a governance index and an independent board of directors, engage especially the Big 4 audit firms, and ensure business sustainability. These variables explain the dependent variable by 94.07%.

5.3 Recommendation

Based on the above findings, some of the recommendations made are as follows:

Manufacturing firms in Ghana should improve on their financial statements to reflect the holistic nature of their operation. Thus increasing the non-financial information to ensure full adherence to IRF.

Manufacturing companies that want to increase their profitability have to increase their liquid assets, sell more of their products or services (sale growth), adhere to the general reporting guidelines, engage on an independent board of directors, ensure assets quality and employ a governance index of improving performance.

5.4 Practical implication and suggestions for future research

The results have particularly important implications for large, profitable manufacturing companies that report their financial statements to reflect IRF. Managers should increase transparency by expanding the content and quality of information contained in the integrated reports.

The study's first objective was to identify the non-financial information disclosed by manufacturing companies listed on Ghana Stock Exchange. Future research should investigate whether those items in each content element really explain

those variables. Factor analysis can be employed as the best method to assess the loading factors for each content element.

In addition, it would be interesting to perform panel data analysis of manufacturing companies in West Africa, assessing the current company reports according to the IIRC integrated reporting framework.

The second objective of the study was to identify the determinants of the integrated re[porting framework. The results revealed that apart from the selected variables, other variables can influence IRF. Future studies should also look for other variables like sustainability committee, as suggested in the study of Merve & Cemil (2018).

The last objective of the study was to investigate the effect of adherence to IRF on profitability. Economic value-added, Return on Asset and Tobin's Q were used to measure performance (profitability). Future studies should consider an alternative approach to quantifying financial performance. It would be interesting to consider firms' actual performance using different variables to measure the actual performance of entities listed on the Ghana stock exchange.

Nonetheless, the study relied on annual reports for data, which could not provide adequate information in this respect. Therefore, future studies can consider how IRF affects financial performance by employing other survey instruments such as questionnaires.

REFERENCES

Abeysekera, A. (2013). A template for integrated reporting. *Journal of Intellectual Capital,14(2)*, 227-245. Retrieved from http://dx.doi.org /10.1108/14691931311323869

Addo, A. (2015). *Lecture notes on accounting theory: part 1*. Unpublished manuscript

Antwi. K. S. & Kasim. H. (2015). Qualitative and quantitative research paradigms in business research. *European Journal of Business Management*, 7(3), 217-225. Retrieved from http://doi.195432187 2-1PB.pdf

Atkins, F. J., Solomon, A., Norton, S., & Joseph, L. N. (2015). The emergence of integrated private reporting. *Meditari Accountancy Research, 23(1),* 28- 61. Retrieved from http://dx.doi.org/10.1108/MEDAR-01-2014 -0002

Atkins, J. & Maroun, W. (2014). South African institutional investors' perceptions of integrated reporting. *ACCA*. Retrieved from http://ab109

Abu-Rub, N (2012). Capital structure and firm performance: Evidence from Palestine stock exchange. *Euro Journals,* 23 (3), 214 - 356.

Asimakopoulos, I., Samitas, A., & Papadogonas, T. (2009). Firm-specific and economy-wide determinants of firm profitability: Greek evidence using panel data. *Managerial Finance*, 35 (11), 930 – 939.

Barth, M. E., Cahan, S. F., Chen, L. & Venter, E. R., (2017); The Economic Consequences Associated with Integrated Report Quality: Capital Market and Real Effects: https://ssrn.com/abstract=2699409 or http://dx.doi.org/10.2139/ssrn.2 699409

Baltagi, B.H. (2015). *Econometric analysis of panel data* (7rd ed.). Chichester: Wiley.

Beck, C., Dumay, J. and Frost, G. (2017), "In pursuit of a 'single source of truth': from threatened legitimacy to integrated reporting", Journal of Business Ethics

Bui, Y.N. (2019). *How to write a master's thesis*, U.K, Sage Publications International.

Campbell, D.J. (2003) Intra- and Inter-Sectoral Effects in Environmental Disclosures: Evidence for Legitimacy Theory? Business Strategy and the Environment, 12,357-371. https:**//doi.org/10.1002/bse.375**

Chartered Institute of Internal Auditors. (2015). The role of internal audit in non-financial and integrated reporting. Retrieved from http://www. Integrated-reporting-FINAL.pdf

Collis, J., & Hussey, R. (2019). *Business research: A practical guide for undergraduate & postgraduate students*. Basingstoke, Hampshire [UK: Palgrave Macmillan.

Cooper, D.R., & Schindler P.S. (2017). *Business research methods.* Boston Irwin McGraw-Hill.

Cowen, S.S., Ferreri, L.B. and Parker, L.D. (1987) The Impact of Corporate Characteristics on Social Responsibility Disclosure: A Typology and

Frequency-Based Analysis. Accounting, Organizations and Society, 12, 111-122. https://doi.org/10.1016/0361-3682 (87)90001-8

Deegan, C. and Gordon, B. (1996) A Study of the Environmental Disclosure Practices of Australian Corporations. Accounting and Business Research, 26, 187-199. https:**doi.org/10.1080/00014788.1996.9729510**

Donaldson, T., & Preston, E. L. (1995). The stakeholder theory of the corporation: concepts, evidence, and implications. *Academy of Management Review,* 20(1), 65-91

Eccles, R.G., Ioannou, I. and Serafeim, G. (2014), "The impact of corporate sustainability on organizational processes and performance", Management Science.

Eccles, R.G. and Saltzman, D. (2011), "Achieving sustainability through integrated reporting", Stanford Social Innovation Review.

Elliot, B. & Elliot, J. (2011). *Financial accounting and reporting* (14th ed.). Edinburgh Gate, Harlow. England. Pearson Education Limited Global reporting initiative. (2015, May). *Wikipedia.* Retrieved from http://en.wikipedia.org/wiki/Global_reporting_initiative

Farrar, D. E., & Glauber, R. R. (1967). Multicollinearity in regression analysis: The problem revisited. The Review of Economic and Statistics, 49, 92– 107. https://doi.org/10.2307/1937887

Gray, R., Kouhy, R. and Lavers, S. (1995) Corporate Social and Environmental Reporting— A Review of the Literature and a Longitudinal Study of U.K. Disclosure. Accounting Auditing & Accountability Journal, 8, 47-77. https://doi.org/10.1108/09513579510146996

GRI. (2013). the sustainability content of integrated reports-a survey of pioneers. Retrieved from www.globalreporting.org/GRI-IR.pdf

De Souza Cunha, F.A.F. and Samanez, C.P. (2013). Performance analysis of sustainable investments in the Brazilian stock market: a study about the corporate sustainability index (ISE), *Journal of Business Ethics,* 117 (1), 19-36.

Disclosure Practices in the Textile and Garment Industry: Evidence from a Developing Country. Australian Accounting Review, 23, 117-134. https://doi.org/10.1111/j.1835-2561.2012.00205.x

Gadzo, S.G., Kportorgbi, H.K. & Gatsi, J.G. (2019). Credit risk and operational risk on the financial performance of universal banks in Ghana. A partial least squared structural equation model (PLS-SEM) approach. *Cogent Economics and Finance* 7: 1589406 https://doi.org/10.1080/23322039.2019.1589406

Global reporting initiative. (2015, May). *Wikipedia.* Retrieved from http://en.wikipedia.org/wiki/Global_reporting_initiative

Gray, R., Kouhy, R. and Lavers, S. (1995) Corporate Social and Environmental Reporting— A Review of the Literature and a Longitudinal Study of U.K. Disclosure. Accounting Auditing & Accountability Journal, 8, 47-77. https://doi.org/10.1108/09513579510146996

GRI. (2013). the sustainability content of integrated reports-a survey of pioneers. Retrieved from www.globalreporting.org/GRI-IR.pdf

Hackston, D. and Milne, M.J. (1996) Some Determinants of Social and Environmental Disclosures in New Zealand Companies. Accounting, Auditing & Accountability Journal, 9, 77-108. **https://doi.org/10.1108/09513579610109987**

Hanks, J. (2016). Addressing the challenges of materiality – more than just compliance. *ACCSR.* Retrieved from accsr.com.au/addressing-the-challenge-of-materiality…

Hausman, J. A. (1978). Specification tests in econometrics. Econometrica, 46 (6), 1251-1271.

Havlová, K. (2015), "What integrated reporting changed: the case study of early adopters", Procedia Economics and Finance, Vol. 34 No. 17, pp. 231-237.

Havlova, K. (2015a). Integrated reporting: new trend from the perspective of Czech companies. *The 9th international days of statistics and economics, Prague.*

Haji, A.A. and Anifowose, M. (2017), "Initial trends in corporate disclosures following the introduction of integrated reporting practice in South Africa", Journal of Intellectual Capital.

Haji, A.A. and Hossain, D.M. (2016), "Exploring the implications of integrated reporting on organizational reporting practice: evidence from highly regarded integrated reporters", Qualitative Research in Accounting & Management.

Henning, E., van Rensburg, W., & Smit, B. (2014). *Finding your way in qualitative research*. Pretoria: Van Schaik

Higgins, C., Stubbs, W. and Love, T. (2014), "Walking the talk(s): organizational narratives of integrated reporting", Accounting, Auditing & Accountability Journal, Vol. 27 No. 7, pp. 1090-1119.

Hodge, K., Subramaniam, N. and Stewart, J. (2009). Assurance of sustainability reports: impact on report users' confidence and perceptions of information credibility, *Australian Accounting Review*, 19 (3), 178-194.

Huggins, A., and R. Simnett (2015a), 'Integrated Reporting and Assurance: Where Can Research Add Value?', *Sustainability Accounting, Management and Policy,* Vol. 6, No. 1, pp. 29- 53. http://doi.10.1016/S22125671(15)01624-X

IIRC (2011), 'Towards Integrated Reporting: Communicating Value in the 21st Century', *Discussion Paper, International Integrated Report Council,* available at www.theiirc.org, accessed 19 July 2015.

(2013a'The), International <IR> Framework', available at http://www.theiirc.org/international-ir-framework/, accessed 19 July 2015.

(2013b), 'Business and Investors Explore the Sustainability Perspective of Integrated Reporting', *IIRC Pilot Program Yearbook 2013,* available at www.theiirc.org, accessed 19 July 2015.

(2014a), 'April Newletter', available at http://www.theiirc.org/2014/04/30/april-newsletter-2/, accessed 19 July 2015.

(2014b), 'IIRC welcomes South Africa's Endorsement of the International Integrated Reporting Framework', available at http://www.theiirc.org/2014/03/21/iirc-welcomes-south-africas-endorsement-of-the-international-integrated-reporting-framework/, accessed 19 July 2015.

IIRC, and Blacksun (2014), 'Realizing the Benefits: The Impact of Integrated Reporting. Retrieved from: http://www.theiirc.org/wpNcontent/uploads/2014/09/IIRC.Black_.Sun_.Research.IR_.Impact.Single.pages.18.9.14.pdf.

International Journal of Islamic and Middle Eastern Finance and Management, 1,275-284. https://doi.org/10.1108/17538390810919592

Ioannou, I. & Serafeim, G. (2011). *The consequences of mandatory corporate sustainability reporting*. London Business School. Harvard Business School. Retrieved from http://EconPapers.repec.org/RePEc:hbs: wpaper:11-100

Ioannou, I., and G. Serafeim (2015), 'The Impact of Corporate Social Responsibility on Investment Recommendations', *The Academy of Management Journal,* Vol. 36, No. 7, pp. 1053-1081.

International Integrated Reporting Council (2013). *The international < I.R.> framework*. Retrieved from http://www.13-12-08-the-international-ir-framework-2-1.pdf

International Integrated Reporting Council. (2011). The world has changed-reporting must too. Retrieved from www.theiirc.org

Kamal, Y. and Deegan, C. (2013) Corporate Social and Environment-Related Governance

Kiliç, M., Kuzey, C. and Uyar, A. (2015), "The impact of ownership and board structure on corporate social responsibility (CSR) reporting in the Turkish banking industry", Corporate Governance: The International Journal of Business in Society.

KPMG, (2013). *The KPMG survey of corporate responsibility reporting*. Retrieved from http://www.kpmg.com

KPMG, (2015). *Currents of change. The KPMG survey of corporate responsibility reporting*.

KPMG. (2012). *Integrated reporting performance insight through better business reporting*.

Krzus, P. M. (2011). Integrated reporting: if not now, when? *Zeitschrift fuer Internationale Rechnungslegung*, 271-276. Retrieved from http:// doi.irz06-110001

Lincoln, Y.S. & Guba, E.G. (2015). "*Paradigms and perspectives in contention". In N. Denzin and Y. Lincoln (eds.),* Handbook of Qualitative Research (2nd ed., pp. 163-188). Thousand Oaks, CA: Sage.

Marx, B., Mohammadali H. A. & Lansdell, P. (2020) University accounting programmes and the development of Industry 4.0 soft skills Australian Accounting Review, 23, 117-134. https://doi.org/10.1111/j.1835-2561.2012.00205.x

Mirfazli, E. (2008) Corporate Social Responsibility (CSR) Information Disclosure by Annual Reports of Public Companies Listed at Indonesia Stock Exchange (IDX).

Ness, K.E. and Mirza, A.M. (1991) Corporate Social Disclosure: A Note on a Test of Agency Theory. British Accounting Review, 23, 211-218. https://doi.org/10.1016/0890-8389(91)90081-C

Neuman, W.L. (2013), "Social Research Methods: Qualitative and Quantitative Approaches" (5th ed.). Boston: Allyn and Bacon

Orsato, R.J., Garcia, A., Mendes-Da-Silva, W., Simonetti, R. and Monzoni, M. (2015). Sustainability indexes: why join in? A study of the 'corporate sustainability index (ISE)' in Brazil. *Journal of Cleaner Production,* 96 (11), 61-170.

Parmar, L. B., Freeman, E. R., Harrison, S. J., Wicks, C. A., Purnell, L., & de Colle, S. (2010). Stakeholder theory: state of the art. *The Academy of Management Annals,* 4(1), 403-445.

Park, H. M. (2019). *Linear regression Model For panel data using SAS, STATA, LIMDEP and SPSS.* Indian University

Patten, D.M. (1991) Exposure, Legitimacy, and Social Disclosure. Journal of Accounting and Public Policy, 10, 297-308**. https://doi.org/10.1016/0278-4254 (91)90003-3**

Saunders, M., Lewis, P., & Thornhill, A. (2012). *Research methods for business students.* (6th ed.). England: Pearson Education Limited.

Serafeim, G. (2014), *Integrated Reporting and Investor Clientele*, Working Paper, Harvard Business School.

Soyka, P.A. (2013) the International Integrated Reporting Council (IIRC) Integrated Reporting Framework: Toward Better Sustainability Reporting and (Way) Beyond. Environmental Quality Management, 23, 1-14**. https://doi.org/10.1002/tqem.21357**

Reimsbach, D., Hahn, R. and G. rtürk, A. (2017). We have integrated reporting and assurance of sustainability information: an experimental study on professional investors' information processing, *European Accounting Review,* 1-23, DOI: 10.1080/09638180.2016.1273787.

Reporting Framework: Toward Better Sustainability Reporting and (Way) Beyond. *Environmental Quality Management*, 23, 1-14. https://doi.org/10.1002/tqem.21357 The ten worst corporate scandals of all time. Retrieved from www. accounting-degree.org/scandals *reporting*. London Business School. Harvard Business School. Retrieved from http://EconPapers.repec.org/RePEc:hbs: wpaper:11-100

Reports of Public Companies Listed at Indonesia Stock Exchange (IDX).

Rivera-Arrubla, Y.A., Zorio-Grima, A. and García-Benau, M.A. (2017). Integrated reports: disclosure level and explanatory factor, *Social Responsibility Journal,* 13 (1),155-176.

Ross, S.A., Westerfied, R.W., Jeff, F.J., & Jordan, B. D. (2011). *Core principles and application of corporate finance.* New York, McGraw-Hill/Irwin.

Saunders, M., Lewis, P., & Thornhill, A. (2012). *Research methods for business students.* (6th ed.). England: Pearson Education Limited.

Soyka, P.A. (2013) the International Integrated Reporting Council (IIRC) Integrated

Wooldridge, J. M. (2010). *Econometric analysis of cross-section and panel data.* MIT press.

Zhou, S., Simnett, R. and Green, W. (2017), "Does integrated reporting matter to the capital market?", Abacus, https://www.researchgate.net/publication/314197895_