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Board Gender Diversity and Financial Performance:

- Evidence of Manufacturing and Service Companies in Ghana -

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Abstract

Board Gender Diversity and Financial Performance:

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The objective of this research is to investigate how gender diversity impact on the performance of selected manufacturing and service firms in Ghana. The sample will include 30 Manufacturing and Services businesses registered under the Company Code Act 1969, 179 of the Ghana's Security and Exchange Commission.

The project will span from the years 2006 through to 2018, yielding panel data from 360 firms. The study seeks to examine the percentage of female boards members of some service and manufacturing firms in Ghana, to ascertain the individual roles of women on the boards of those companies, and to investigate also how those companies in Ghana performs financially.

Return on Asset (ROA) will be the dependent variable, and it will be used to assess the financial performance of the selected organizations. The independent variables will be board gender diversity (as defined by the Blau index) and the percentage of women on the board. Firm size and firm age will be control variables. The pooled Ordinary Least Squares method will be used for the measurement (OLS). The STATA software will be used to execute the regression, which will be followed by the analysis, conclusion, and recommendation.

Previous research has shown that women contribute considerably to company performance, hence a major policy proposal will be for corporations to include women as board of directors.

Keyword: (Financial Performance, Gender Diversity)

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Table of Contents

List of Tables

CHAPTER ONE

INTRODUCTION

1.1 Background

The issue of Board gender diversity has attracted several debates both at the international and local levels. World leaders, professionals, researchers and stakeholders are concerned about the need for gender diversity on the board of companies. There is a global concern about gender equality as a means of utilizing women's potential on board and this has made gender diversity to become a sensitive aspect of the strategic affairs of an organization (Pucheta-Martinez MC, Gallego-Alvarez, 2020). The Cadbury Committee report in the UK (1992) and the Sarbanes-Oxley Act require the need for corporate governance mechanisms to be adhered to by companies (Reguera-Alvaradoet al., 2015). Board gender diversity is a mechanism of corporate governance which is required as a best practice that will result in the maximization of the wealth of corporate bodies (Perrault E., 2015).

Board gender diversity, according to Dutta and Bose (2006) refers to the different talents and capabilities of women and men, the consideration of women's potential as board of directors as well as how men and women work with each other in achieving common objectives. Board gender diversity is also referred to as the use of diverse skills and capacities of women and men as board members (Reddy S, Jadhav AM., 2019). It is related to the participation of women on the board of organisations as a means of raising the corporate image and leading to the attainment of corporate objectives.

Board diversity is broadly categorized into board demographic diversity (service task of the board which is based on a specific business process or function) and board structural diversity (control

task of the board which is used to control the execution of the workflow) (Francoeur, Ben-Amar, Labelle & Hafsi, (2013). The board of directors plays major roles such as monitoring role, provision of links to external resources, strategic roles and adhering to corporate governance best practices and reports. The board of directors forms an vital corporate governance mechanism that ensures the judicious use of resources and proper running of corporations to guarantee shareholder wealth maximization. To enable an efficient function of the board, there need to be women present on boards.

Research conducted by (Carter, Simskins and Simpson, 2003) revealed that women's participation will introduce certainty in the activities of the board as women freely ask questions and disclose certain hidden things which could not be done willingly by their male counterparts. Women on board are considered in a broader perspective as introducing fresh mindsets to complex issues and women are known for their unique understanding of consumer behaviour and as a result, women's involvement in corporate boards is encouraged to be practised by corporations (Campbell & Vera, 2008; Bathula 2008; Brennan and McCafferty, 1997). Women are also known to be more trustworthy and collaborative, bringing fresh information, different perspectives and different solutions to challenges that can help to improve board dynamics (Dang et al, 2012 Croson and Buchan, 1999; Lincoln and Adedoyin, 2012).

1.2 Statement of the Problem

As a means of making use of men and women potential within corporate institutions, the Organization for Economic Co-operation and Development (OECD) requires the need for gender diversity. Advocacy for gender diversity in corporate boards continues to gain recognition globally on both economical and ethical backgrounds (Peng C. She P-W., 2020). Despite this effort, there is a lack of adequate representation of women in most boardrooms which is leading to the

underperformance of most companies, especially in developing countries. According to the 2015 African Development Bank (AfDB) report, women occupy 14 % of board seats of 307 listed companies in Africa. According to the report, countries like Kenya, Ghana and South Africa recorded the highest percentage of women's participation on boards with 19.8 %, 17.7 % and 17.4 %, respectively, whereas countries like Morocco, Tunisia and Egypt recorded 8.2 %, 7.9 % and 5.9 % respectively. This means that in Africa, women representation on boards is just about 12.7 %, whereas men occupy about 87.3 % of board seats in addition to unquoted firms. Research conducted by (Carter, Simskins and Simpson, 2003) revealed that women's participation on board influences financial performance positively just as (Erhardt, Werbel and Shrader (2003) discovered in their research that, there is a positive correlation between gender diversity and firm financial performance through both Return on Asset (ROA) and Investment(ROI).

According to research conducted by McKinsey & Company (2007), companies perform best when women play effective roles on their boards. This is to mean that, companies without females present or a low percentage of women on their boards may lack the potential of women which is needed to ensure enhanced performance. One would have thought that companies could consider the implementation of gender-related policies which will lead to their performance. This has not been the case in Ghana as most of the companies are not having women on their boards and the few ones are having more men on the board as compared with their female counterparts. Most of the research on gender diversity were done in advanced countries with only a few studies undertaken in developing countries like Ghana, Kenya, India, and Malaysia and this makes it difficult to unravel the potential of women on boards which needed to be considered by policymakers to enhance the performance of firms (Barako & Brown 2008; Marimuthu & Kolandaisamy 2009).

The Ghanaian culture also considers men as heads over women and that gives men superiority in terms of decision making leaving the potential of women uncovered. In Ghana, Amidu and Abor (2006) is identified as one of the famous publications that consider gender diversity in the boardroom of firms. They concluded in their research that, women are slightly considered for board membership within corporations in Ghana, meanwhile there is a potential for women to play a complementing role that will lead to the performance of firms.

Amidu and Abor (2006) identified that newly established firms in Ghana even have more women on their boards than firms that are in existence for several years and this brings us back to the problem of focusing on quoted companies with less consideration to unquoted companies. According to their studies, it is only after incorporation that companies consider the appointment of female directors, they decline after expansion. Women appointment is also considered based upon the nature of the industry and this sees less women in the manufacturing and construction companies than it is in the service and financial sectors. Ghana has emerged as the favorite Sub-Saharan African investment location and policy relating to gender diversity is required to make use of the potential of women and men which will lead to the growth and performance of firms. This necessitated the choice of the topic to examine financial performance and board diversity of selected service and manufacturing companies in Ghana.

1.3 Purpose of the study

The main purpose of this study is to examine the composition of the board to show the participation of both women and men on the board of Manufacturing and Service Companies in Ghana.

The research aims to address the following specific objectives;

i. Examine the proportion of women present on the board of selected manufacturing and service companies in Ghana.
ii. Determine the individual roles of women board members of selected service and manufacturing companies in Ghana.
iii. Analyse the financial performance of the chosen Ghanaian service and manufacturing companies.

1.4 Research Questions

i. What is the percentage of women on the board of manufacturing and service firms in Ghana?
ii. What are the roles of women on board in the financial performance of the selected companies?
iii. What is the financial performance of those companies?

1.5 Scope of the Study

The extent of the study is the Ghanaian selected manufacturing and service companies which include both multinational and indigenous companies which are all registered in accordance with the requirements of the Company Act of Ghana. These companies are normally issued with a certificate of incorporation and a certificate to commence business. The concentration will be upon the companies that undertake corporate social responsibilities and provide employment avenues to citizens. The study seeks to examine the financial performance and gender diversity in of these companies. The study will therefore review scholarly works and other research publications to form part of the empirical evidence of the study. This will allow for a large-scale review of relevant literature on the subject.

1.6 Significance of the Study

The research will add up to the existing literature on board gender diversity in the boardroom of large service and manufacturing companies in Ghana and it will uplift the image of board diversity research in Ghana as a means of improving previous studies which were conducted on the topic in Ghana (Amidu and Abor, 2006). The research will also create awareness concerning the need for gender diversity in the boardroom to assist policymakers in implementing policies that will enhance the participation of women in the boardroom of corporations. The result will assist decision-making bodies at different levels of life towards the need for considering women's potential in leadership and will serve as a resource for academia.

1.7 Situational review in the Ghanaian context

The World Bank Enterprise Survey report indicates that, the percentage of firms with women involvement on boards in Ghana is 31.6%, whiles in Sub-Sahara Africa is 31.2. The report also indicates that the percentage of firms with a majority women ownership in Ghana is 14.7%, whiles it is 12.9% in Sub Sahara. The percentage of full-time female workers in Ghana is 24.7%, whiles it is 27.8% in Sub-Sahara Africa. The percentage of full-time non-production female workers is 18.6%, whiles it is 18.8% in Sub-Sahara Africa. The percentage of permanent full-time non-productive workers that are female is 32.8%, whiles it is 29.7% in Sub-Sahara Africa.

Companies based in Ghana are required by law (the Companies Code, 1963 (Act, 179)) to use corporate governance methods that include gender diversity on company boards (Institute of Directors-Ghana). In 2010, a Code of Best Practices was issued by the Security and Exchange Commission of Ghana to advise corporations in avoiding conflicts of interest between owners and the agents of the firms, and in reducing the negative effects of information asymmetry. The

Securities and Exchange Commission exercises oversight over collective investment schemes that have been granted a license under the Securities Industry Law, 1993 (PNDCL 333), as amended by the Securities Industry (Amendment) Act 2000 (Act 590). (SEC).

1.8 Situational review in the context of other countries

The National policy in the United Kingdom (UK) encourages the implementation of gender balance in the boardrooms of all companies operating in the UK and its stability. The European Union supports gender policies and in a recent negotiation in Brussels, E.U initiates a compulsory 40% participation by female potential. Norwegian government policy on gender diversity has resulted in 40% women participation, whereas the Spanish government requires equity and equality in gender within firms that have more than 250 employees to implement equity in executing policies on gender diversity.

The international labour organization (ILO) report in the year 2009 revealed that female participation in labour markets has seen significant growth, especially during the 1980s. The report reveals that the participation of women in 2008 was 50.4% as compared with 48.3% in 1998 within the European Union. It also shows an improvement of 52.6% in 2008 as compared with 44.2% in 1998 covering Caribbean and the Latin America (ILO 2009).

With regards to the engagement of women in top management, a Catalyst (2011) survey of Fortune 500 female boards of directors found that 15.7% of females participated in 2010 compared to 15.2% in 2009.

Catalyst research report in considering the proportion of female membership in the board of fortune 500 companies in 2005 revealed that women held 14.7% of Fortune 500 board seats in the United State of America. Even though this shows an improvement after comparing the result with

the 2003 and 1995 Catalyst reports that concluded on 13.6% and 9.6% respectively, there is more room for improvement in women's participation on the boards. The World Development Report 2013 and 2012 on Jobs and gender respectively, also revealed that, in the 1980s and 1990s, women's active involvement in contributing their expertise in labour markets worldwide grew substantially, even though there is limited job creation leading to the problem of unemployment reported mostly in developing countries (ILO, 2007).

Recent years have seen a wake-up call on gender consideration within corporations and in governance (Sanchez MS., 2017). This led some countries such as Norway, France, Italy and Belgium to implement national policies that will improve gender diversity on the boards of corporations. For example, In Norway, there is a consideration of 40% of board seats for women as well in Spain, where companies are obliged to increase female participation in the boards to 40% which is in operation since 2015.

1.9 Justification of the Study

The research aims to investigate women's role on boards of directors in Ghanaian manufacturing and service enterprises, and the findings will serve as a reference point for the Ghanaian government in developing gender diversity policy.

The study will also add to the current literature on board gender diversity in the boardrooms of manufacturing and service companies, as well as improve prior researches like Amidu and Abor (2006), and will aid the selected firms in considering women's participation on their boards. The research will also raise awareness about the importance of gender diversity in the boardroom in order to aid policymakers in enacting legislation that will increase women's participation in corporate boardrooms. The findings will help decision-makers at all levels of society understand

the importance of recognizing women's leadership potential and will serve as a reference point for academia.

1.10 Organisation of the Study

The research covers five chapters outlined as follows; Chapter 1 gives an introduction to the study followed by some identified problems and objectives of the study. Chapter two also provides the relevant empirical, conceptual and contextual literature as well as theoretical issues on corporate governance, board gender diversity, women's membership on corporate boards and firm performance. The third chapter discusses the methodology utilized to conduct the study and the chapter four presents an analysis and discussions on data as well as research findings, whereas the fifth Chapter draws conclusions and give recommendation and some areas that will need further research.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter contains the theoretical review, conceptual review, conceptual framework and empirical review of the study. The conceptual review covers the corporate governance concept, corporate governance mechanisms, gender diversity concept and women on board of companies and their effect on financial performance. The theoretical review includes the Agency theory, Stakeholder theory and Resource dependency theory. The empirical research examines related works which were followed by how the variables have been conceptualised in the study.

2.1 Conceptual Review

In the conceptual review, the fundamental principles relevant to this study are explained. In doing so, it considers essential concepts, variables, and factors related to the subject at hand. The study's conceptual review is shown below:

Corporate Governance Definition and Concept

This concept is grounded on the best means to control and direct companies (Berle and Means, 1932). The Cadbury Committee report in the year 1992 considers the concept of corporate governance as enabling discipline within corporations (Gilson, 2006). The issue of corporate governance has caught the attention of policy makers, managers of companies, researchers and other stakeholders. The corporate governance concept is necessary towards the sustainable performance of companies through transparent, fair and accountable practices. It helps in addressing the challenges of companies and the need for stakeholders of companies to team up in order to maximise the wealth of companies.

The concept of corporate governance has gained global attention, especially after the collapse of multinational companies including Enron and WorldCom. The aftermath of the corporate scandals was when the world leaders were engaged to address the scandals and to formulate policies that will regain the confidence of rational investors in companies. The effort of World leaders, professionals and other stakeholders has also resulted in various Committee reports including the Cadbury committee report, Sarbanes Oxlyn Act among many. This has also made it possible for companies to adhere to corporate governance mechanisms (Gender diversity, CEO duality, independence of the board, board size etc) and other best practices such as transparency, accountability fairness and laws and customs of host nations (Morin and Jarrell, 2001).

Corporate governance is therefore considered as a means of ensuring good corporate governance to ensure that roles including board, management, and suppliers as well as ensuring that, protection of the right of part owners is ensured (Abdurrouf, et al. 2010). Companies are to ensure proper corporate governance issues as this will help to build the confidence of shareholders and to mitigate the consistent recording of corporate scandals both in developing and developed nations, the discipline of corporate governance cannot be overemphasized. The issue of information asymmetry as well as agency cost can be addressed efficiently when management commitment to corporate disciplines becomes more efficient and translate into the performance of companies.

Corporate Governance Mechanisms

The mechanisms of corporate governance have become necessary for the practices of companies as it engages the active participation of the Board of Directors and Executives of Companies. It enables the stewardship and fiduciary roles of executives to be practised in a transparent and accountable way in companies. The mechanisms of corporate governance according to Adekoya (2012) include; board composition, the board size, C.E.O duality, board committees, independent

board membership and many others. These mechanisms are considered as the medium to mitigate conflict of interest and to ensure accountability within corporations (Carter, D. A, Simkins B.J, and Simpson W.G., 2003).

Board gender diversity as a mechanism of corporate governance relates to the participation of men and women on the board of companies (Dutta and Bose, 2006). Board Composition also considers the existence of executive boards who are mostly present in the daily affairs of the company and non-executive boards who are involved in policy-making and planning, but absent from the regular daily affairs of the company. It also considers the gender and demographic composition of the board (Donaldson & Davis 1994). Board size denotes the total board participants, which when appropriately considered could lead towards the growth of corporations. Unfortunately, there is no guarantee as to the appropriate number of board members that can undertake executive board responsibilities effectively. However, some researchers conclude on larger board size (Jensen 1976; Yermack, 1996). The best board is, however, the board that prioritizes the objectives of the company and does its possible best to attain such objectives (Pfeffer, 1972; Klein, 1998; Adam & Mehran, 2003)

The Board committee is another corporate governance mechanism. Every co-operative society has an organized body of people who work on equal terms towards the achievement of a unique objective. The Board committee is important to the growth of boards. As a concern to the board committee, The Cadbury Committee report in 1992, recommends the formation of sub-committees that could perform audit functions, remuneration of executives and nominate executives. (Davis 1997; Laing & Weir 1999). C.E.O duality ensures that the C.E.O of the corporation must not at the same time assume the position of the chairperson during board meetings. In such a situation, he will have the ultimate authority to influence the board's decisions to his advantage, which may

not be a conducive environment for the corporation's growth. Both agency and stewardship theory support the above explanations and agency theory sees the involvement of women on board as a means to minimize C.E.O dominance through their power-sharing ability.

It is clear based on the reviewed literature that mechanisms of corporate governance ensure efficient usage of resources in a more transparent and accountable manner through the active participation of executives of companies. Stakeholders' concerns can be better addressed when these mechanisms are efficiently considered and implemented within companies.

Gender Diversity as a Mechanism of Corporate Governance

Gender diversity as a mechanism of corporate governance is based upon the need for using the potential of women and men, especially on corporate boards and how men and women can together contribute their knowledge and skills towards the growth of a particular company (Dutta and Bose, 2006). The concept is necessary as it engages the potential of both men and women towards the growth of companies. According to Shleifer and Vishny (1997), board gender diversity is one of the variables of corporate governance that has caught the attention of world leaders, corporate bodies, professionals and researchers most especially after the corporate scandals. When there is diversity on board, it brings to bear the potential of both men and women. Diversity on board will make women on board introduce fresh mindsets to complex issues, understand consumer behaviour, demonstrate trustworthiness, collaborate and bring different solutions to challenges (Dang et al, 2012 Croson and Buchan, 1999). Board diversity affects financial performance positively and negatively (Carter, Simkins & Simpson, 2003).

Modern companies should consider instituting board diversity based on board structure diversity and board-specific diversity which in the end will enable the potential of board members to be contributed to the board of companies and result in the growth of the beneficial companies. This

is acknowledged and encouraged to be practiced not only by companies but also in the governance of nations and in policy making.

Gender diversity refers to the varying abilities and potentials of women and men as equal resources, as well as the inclusion of women on the board of directors (Herring, 2009). Gender diversity refers to the proportion of women and in men the workplace, as well as the manner in which they engage, communicate, and collaborate to improve an organization's performance and achieve its ultimate goal, which is the maximization of shareholder wealth (Dutta and Bose, 2006). Gender diversity is also referred to as the attention to the diverse skills and capacities of women and men as board members (Foldy & Scully, 2003). Gender diversity encourages a joint effort and sharing of knowledge by bringing board functioning which will help to raise the corporate image and guide corporations to attain maximum benefits.

Gender diversity research has gained higher concern in academic and other research publications as a result of the need to utilize the potential of both men and women to enhance the performance of organisations. Research conducted by Carter, Simskins and Simpson (2003) revealed that women's participation on boards will introduce new ideas in the activities of boards as women freely ask questions and disclose certain hidden things which could not be done willingly by their male counterparts.

Previous studies has been done to assess board gender diversity impact on company financial performance. Gender diversity was measured on firm performance using market-bases and accounting-bases such as Return on equity (ROE), Return on Investments (ROI), Return on Assets (ROA) and Tobin’s Q on an independent variable such as; the Blau, 1977, dummy variable, percentage of female directors. Some of these researches concluded on a positive correlation between gender diversity and the financial performance of companies (Carter, Simkins& Simpson,

2003; Francoeur, Labelle & Desgagne, 2008; Thomsen et al. 2009). Other researchers used the same or similar variables but revealed a negative influence of gender diversity on the financial performance of companies (Niederle and Vesterlund, 2007). These show mixed results of past studies on gender diversity and the financial performance of companies. The main concern is how the potential of women will be considered on the board of companies both in developed and developing countries. It is therefore necessary for the current studies to be conducted to make use of some manufacturing and service companies that are operating in Ghana and to measure how board gender diversity will affect the financial performance of these companies.

Corporate Governance and Gender Diversity in Ghana

In Ghana, as a result of scandals in the corporate world, the Companies Code, 1963 (Act, 179) was established to regulate limited liability companies in a way of ensuring an effective and efficient internal control system which governs all Ghanaian-incorporated corporations. Although the Companies Code does not necessitate the nomination of independent directors or a balance of executive and non-executive directors, it does provide for the governance of all companies incorporated in Ghana. (Appiah, Awunyo-Vitor, and Awuah-Nyarko, 2017).

A research conducted by the Institute of Directors-Ghana (IoD-Ghana) in 2001also revealed that, there is an increase adherence to corporate governance practices by Ghanaian businesses.The Security and Exchange Commission of Ghana also made sure that corporate firms followed the details of the Code of Best Practices in 2010. This was done to avoid conflicts of interest between the owners and agents of the companies and to mitigate problems relating to information asymmetry. The Securities Industry Law, 1993 (PNDCL 333) also ensures control over issues relating to stock exchanges, collective investment schemes and securities dealers licensed by the Securities and Exchange Commission (SEC). The Securities and Exchange Commission's Code of

Best Practices on Corporate Governance (SEC Code) for the Ghana Stock Exchange (GSE) requires the interests of various stakeholders to be represented on a board, even if the GSE listing regulations remain mute on board size. (Appiah, Awunyo-Vitor, and Awuah-Nyarko, 2017).

Gender diversity is also considered necessary in Ghana. In Ghana, the government requires the Gender ministry in 2009 to implement policies relating to gender consideration in all sectors as a means of promoting gender equality and female participation in decision-making. The quest for the aforementioned enactments and enforcement is to ensure that corporate governance principles and women's potential are considered in order to achieve the ultimate objective of maximizing shareholder wealth.

Women Tertiary Education and the Gender Parity index

The appointment of board members on corporate firms is dependent several factors and educational qualification key to those factors. The least qualification is for the member to attain the level of a tertiary education to be able to qualify to become a board member. When comparing male and female educational opportunities, the Gender Parity Index (GPI) is used. This demonstrates that the gender enrollment gap between public and private universities accounts for a significant portion of the GPI for gross enrollment ratio in tertiary education. It also notes that a GPI less than one indicates that girls have more disadvantages in educational chances than boys, while a GPI more than one indicates the opposite. Over the period under study (2006 to 2018), the 2006 GPI for Ghana stood at 0.53 which steadily increased throughout to 0.77 in 2018 (statista.com). This implies that women’s participation in tertiary education has been showing an increasing trend.

Presence and Roles of Female board members

Women's roles on corporate boards cannot be underrated because they play active roles that result in the sustainable performance of Companies. Women are also known to be more trustworthy and collaborative, bring fresh information, and different perspectives and bring different solutions to challenges that can help to improve board dynamics (Dang et al, 2012 Croson and Buchan, 1999; Lincoln and Adedoyin, 2012). Women introduce fresh mindsets to complex issues and women are known for their unique understanding of consumer behaviour and as a result, women's involvement in corporate boards is encouraged to be practised by corporations (Campbell & Vera, 2008; Bathula 2008; Brennan and McCafferty, 1997).

There are however some negative influences of women on boards according to researchers, stretches from when women portray risk-averse traits when they avoid overconfidence, and in management when they prove to be too emotional, careful and some may even withdraw from competition for promotions or choose to desist from positions of stressful nature (Barber and Odean, 2001; Matsa and Miller, 2011), but their participation on corporate boards is generally recommended.

Financial Performance and Gender Diversity of Companies

Firm financial performance has become bases through which the efficiency of management can be measured and for that matter, rational investors consider among other things the performance of companies before concluding on the decision to invest in them. This performance can be measured by the use of financial performance variables including the use of Gross profit margin (GPM), Return on capital employed (ROCE), and Return on investment (ROI). It can also be based upon the market performance through which the market performance variable including the Tobin' Q,

can be used. The non-financial performance can also be measured by considering some external services rendered by the companies, especially to their immediate environment and to improve the standard of living in societies, which is enclosed in the annual report. Firm financial performance measures the extent to which the economic resources of the firm could yield returns that will maximize the wealth of shareholders (Atrill et al. 2009).

Women on the board of directors play complementary roles to raise the performance of firms and to attain the ultimate objective which is the maximization of shareholder wealth (Dutta and Bose, 2006; Herring 2009). Women on board contribute their potential towards the growth and development of corporations and economies at large (Erhardt, Werbel and Shrader, 2003).

2.2 Theoretical Review

The theoretical review contains the review of theories relating to the area of study and how it can be used in a particular study. It provides theories that support a particular study. Many theories explain the influence of gender diversity on the performance of large quoted and unquoted firms. The agency theory and Stakeholder theory were used for this purpose, whereas the resource dependency theory further explains the responsibilities of management in ensuring judicious use of resources under their care.

Stakeholder Theory

According to Jensen (2001), the stakeholders' theory stipulates the need for a general decision from management which considers the interest of other stakeholders in a firm. However, in identifying who stakeholders are Jensen (2001) opined that they include those that tend to be affected by the operations and welfare of firms relating to employees, clients and other public officials. The theory is established on the notion that firms are established with the objectives of

serving their target groups and not necessarily some selected parties or only owners (Kiel & Nicholson, 2003). The stakeholder theory therefore considers the responsibilities of management of corporations as extending to many parties one could be directly and indirectly be affected through the operations of companies.

Agency Theory

Agency theory is one of the oldest theories which gives a description of the connection between the principal or shareholders of companies and the agents (managers) of companies. The theories require the need for the parties to corporate affairs especially the principal and the agents to efficiently execute their tasks as that will result in a sustainable performance of companies. Berle and Means in the year 1932 deduced the agency theory and it has since remained one of the major theories in corporate governance literature. The theory was first derived in a study that considered how the monitoring roles will become ineffective by corporate boards when management who plays the role of an agent of companies become many on the board (Berle and Means, 1932). According to Carter et al., 2010), board diversity is one of the concerns of the agency theory as this will result in effective monitoring of boards of companies (Carter et al, 2010). According to the study, diversity of the board also enables boards to have their freedom. According to Appiah, K.O (2012), there is a need for the board of companies to be independent as that will enable them to effectively undertake their monitoring roles in companies. When this is accomplished, it will result in the value maximization of companies. Bonazzi and Islam (2013) concluded on the need for independence of boards and this can be accomplished when outside directors are part of the boards who will carry out their oversight roles on the activities that may be undertaken daily by executives of companies and to keep shareholder's interest.

Jensen and Meckling (1976) state that agency theory originates from an economic understanding of risk sharing that takes place between managers and shareholders. These parties are required to undertake their duties, which together will result in the achievement of the goals of the companies. Shareholders require management to undertake certain responsibilities which when achieved, will result in like-minded goals. To be able to effectively carry the monitoring roles by the board, there is the need for board functions to be independent of management, as this will translate into the value of firms (Jensen & Meckling, 1976).

The agency theory guides companies to mitigate issues relating to information asymmetry as well as conflict of interest in companies. It reduces agency costs, which enhances the company's performance. It was necessary for companies to initiate the principal-agent relationship. When this is accomplished, agency costs would be made clear to the principal, but if the agent takes action counter to the agency agreement, it results in more risk than it may be by the principal. There is a need for all parties to be engaged and undertake their individual roles effectively within both listed and unlisted companies to enable the attainment of objectives within these companies.

Stewardship Theory

The stewardship theory indicates a drawback of higher managerial levels as they turned to inculcate non-financial desires and self-interest that include the desire to be recognised and to achieve self-satisfaction and other conditions of services (Muth and Donaldson referenced by Osei, Beatrice 2015). Stewardship theory assists in making economic decisions for firms (Ranasinghe 2011; Rovers (2009).

Stakeholder assumes that the effectiveness of organizations will be depended upon its ability to satisfy the needs of agents and stakeholders of companies (Freeman, 1984). The theory recognizes

the management of companies who undertake daily activities to be stewards whose tasks are mainly to control the resources available to companies effectively and to ensure the sustainability of operations (Muth & Donaldson 1998). Management who are stewards are therefore encouraged to act in the best interests of the principals or shareholders (Donaldson & Davis 1991).

The stewardship theory considers the stewards as those who prioritize the value of firms beyond their personal interest and are supposed to have a primary objective which is mainly the success of companies as may be reflected through higher profitability and sales growth that will lead to the fulfilments of principal's wealth maximization (Davis, Schoorman & Donaldson 1997).

The quoted and unquoted companies are to apply the principles of stewardship theory to simultaneously pay attention to the interests of other parties whose engagement with them will enhance their performance including their clients, employees, shareholders and the community where they operate.

2.3 Empirical Review

Women's involvement on the boards of corporations can be measured based on the percentage of active women representing on corporate boards which even though is low, but gradually increasing (Pathan and Faff, 2013). Literature concerning women board membership has generated opinions from two schools of thought and has been grouped into ethical and economic theories. The former group is against the exclusion of female participation on boards and considers it as discrimination against women's potential. They rather propose for an increase in female participation in order to attain maximum results. The economic school of thought considers firms that couldn't consider females on their boards as firms that suffer from consistent financial performance (Campbell and Minguez-Vera, 2007). Many countries advocate for female participation on the boards of

corporation. This proposal is implemented in countries such as Norway sets legislative instruments demanding 40 percent board seats for women within corporations (Randøyet al., 2009; Rose, 2007). Research conducted by (Fondas & Sassalos, 2000), revealed that the contribution of women's expertise would increase the independence of the board and reflect the quality of governance in the boardroom by providing diverse opinions and brainstorming of practical corporate ideas that can make the board more collaborative (Ruigrok et al., 2007). The participating of women also draws board attention towards the core objective of the board rather than inculcating certain political behaviours that will deviate or shift attention from the main objective (Sing et al., 2008).

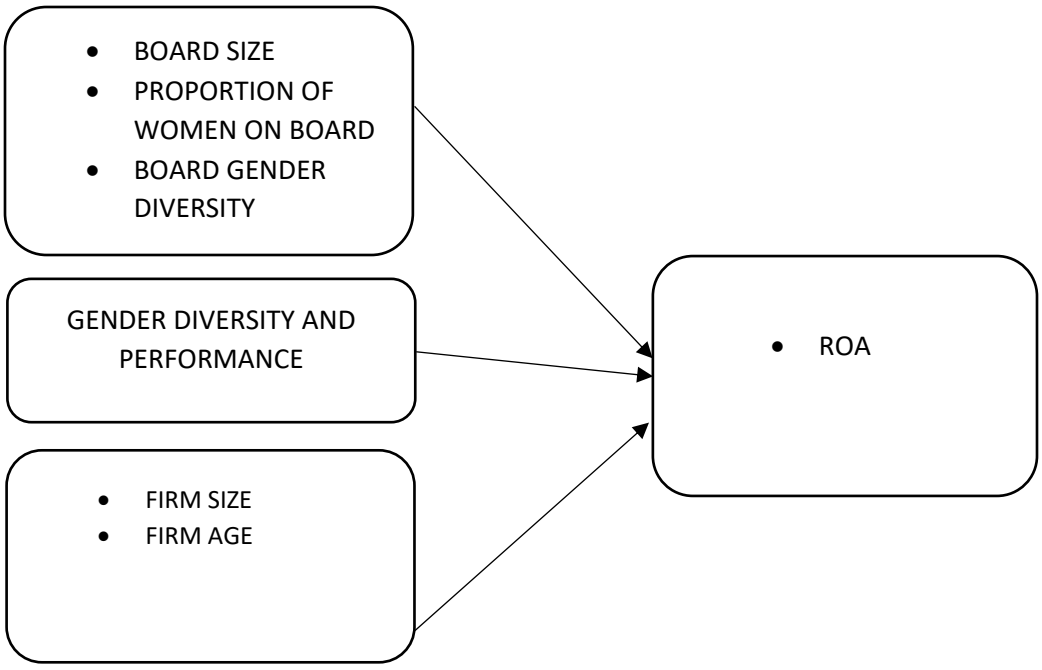
According to the fifth edition of (Deloitte Global Center, 2016) publication on Women in the Boardroom, the data from over 60 countries on the number of female directors, chairs, and committee members shows that women hold 15% of all board seats internationally.

In 2003, women held 13.6% of Fortune 500 board seats in the United States (Catalyst, 2003). According to (Equal Opportunity for Women in the Workplace Agency (EOWA), 2006), the percentage of female directors in Canada, Australia, Europe, and Japan is estimated to be 10.6%, 8.7%, 8% and 0.4%, respectively. In Africa, female participation grew to 12.7%. Many African companies involve at least one woman on the board however, the majority do otherwise. Countries like Kenya and South Africa have the highest female representation of 19.8% and 17.4% whereas Egypt and Tunisia record the lowest of 8.2% and 7.9% respectively for the top 307 listed companies based upon 12 African countries (Geraldine J. Fraser-Moleketi, Simon Mizrahi Director, 2015),

2.4 Conceptual Framework

A conceptual framework that examines the relationship existing between Board gender diversity and financial performance is presented here for a better understanding of their relationships following the works of Aebi et al. (2012). The study considered many variables including the dependent, independent and control variables. The firm performance will be measured using variables for financial performance such as Return on Equity and Return on Asset. However, the ROA will be the main performance variable. For robustness check, other performance variables as indicated were adopted in the measurement of financial performance of services and manufacturing firms in Ghana, the independent variables included the corporate governance mechanisms such as Board size, Board Gender Diversity and the Proportion of Women on Board among other variables. This was followed with some control variables, which were chosen, based upon literature including firm size and firm age. These generally enabled the attainment of the specified objectives in the current study.

Figure 1



Source: Modified from Aebi V. Sabato G. and Schmid M. (2011)**.**

Based upon Figure 1 above, the study hypothesized that:

H1: There is a high percentage of female participants on the boards of manufacturing and services companies in Ghana.

H2. Women's participation on boards has a significant positive effect on the financial performance of manufacturing and services firms.

The significance level of 5% is accepted for the above hypothesis.

2.5 Conclusion

It has been realized from the literature that, most of the researcher's followed positivist and for that matter quantitative research approaches. The research designs were descriptive, Correlation and OLS regression using panel data analysis. From the conclusion, it has been realized that even though the researchers considered corporate governance and related it to different sectors, most of the mechanisms used were board independence, board size, board committee, CEO duality and little on-board gender, which rather is the main issue of concern that has caught the attention of World leaders, professionals and other stakeholders. The few studies about the subject especially relating to developing countries could not really use inferences to better provide a comprehensive conclusion. This necessitated the choice to review the literature on this area of academic discipline and it was related to the large quoted and unquoted companies in Ghana especially those that were recorded under the Ghana club 100 Companies (GIPC, 2017).

CHAPTER THREE

RESEARCH METHODOLOGY

Introduction

The methodology of the research considers the design of the research, the population of the study, sources of data, and data analysis among many others.

3.1 Research Design

The study will make use of both positivist approach to research and a quantitative research method. The descriptive study design will be applied, as well as panel data analysis. The approach will make it possible to look at both time series and cross-sectional data at the same time, which is not possible with other approaches. Some manufacturing and service companies that have registered with Ghana's Securities and Exchange Commission will be chosen using purposive sampling. The multiple regression approach and ordinary least squares (OLS) shall be utilized to analyze how the independent variables relates with the dependent variable.

3.2 Population of the Study

The target population of the current study includes manufacturing and service companies registered with Ghana's Securities and Exchange Commission, whose annual audited reports offers pertinent data that will aid in achieving this study's aims. Most of these firms were listed in 2017's Ghana Club 100 by the Ghana Investment Promotion Center. Thirty (30) of these companies will make up the sample. It will cover the years 2006 through 2018 and include both domestic and foreign companies.

3.3 Data Sources

The annual reports on the official website of the Ghana Stock Exchange (https://www.annualreportsghana.com/resources/equity/gse/) will be the primary source of secondary data used in this study. The target companies' respective websites will also be visited in order to collect the data required to achieve the goals.

3.4 Data Analysis

STATA software will be used to analyze the data for the current research. The secondary data will initially be calculated in an excel spreadsheet before being exported into the STATA program for additional analysis. Tables with the findings will provide information such as the mean, standard deviation, skewness and others.

3.5 Research Variables

The dependent, independent, and control variables will all be included in the study as the variables for the research.

Dependent variables

The primary dependent variable which is the Return on Asset (ROA) will be will be calculated as profit before interest and tax divided by the total asset value. The gross profit margin of the companies will as well be measured. These variables will aid in determining the skill and effectiveness of the executives of the selected companies in utilizing any resource at their disposal (Carter, D.A, Simkins B.J, and Simpson W.G., 2003).

Independent variables

Board size, Gender diversity, and the Percentage of Women on Boards will all be independent variables. Prior research from both industrialized and developing countries also employed these variables (Tukur & Bilkisu, 2014; Jackling, B & Johl, S 2009).

Control variables

The control variables will be the firm age as well as the firm size. The firm size will be determined using the natural log of the total assets. These control variables were utilized in earlier study on the relationship between firm financial performance and corporate governance (Vera, 2008). Several of the companies under consideration were founded years before to the study's 2006 to 2018 time frame, therefore the age of the firm will act as additional control variable. In this study, the number of years since a company's incorporation will be used to determine its age. (Ilaboya) (2016).

3.7 Expected Results:

The researcher anticipates that financial performance of manufacturing and service firms in Ghana will be improved by the board gender diversity.

Panel data model

Depending on the presence of heteroscedasticity and serial correlation, the basic model of panel data could appropriately be established. This model is shown in the following form:

$Y_{it} = \alpha + x_{it}\beta + \varepsilon_{it}$ …….. (1)

α = constant, β = explanatory variable, ε = error term, *i* = firm, *t* = time dimension.

Pooled OLS, random effects, fixed effects, and other methods, such as generalized least squares, can all be used to analyze panel data (GLS). The model to be employed is determined by the outcomes of the Bruesch Pegan and Hausman tests.

The Pooled Regression Model

The cross-section and time series are disregarded as the pool regression model runs the regression model while taking into consideration all of the observations. One of the variables in the cross-section analysis that specifies constant coefficients is this one.

$Y_{it} = \alpha + x_{it}\beta + \varepsilon_{it}$ ……. (2)

α = constant, β = explanatory variable, Ɛ = error term, i = firm, t = time dimension.

3.7.3 Fixed effects model

$Y_{it} = \beta 1_{it} + \beta 2X2_{it} + \beta 3X3_{it} + \mu_{it}$…… (3)

Y = dependent variable, X=explanatory variable, *i* = cross-section unit, *t* = the time period.

Even though each individual intercept does not change over time, or is time-invariant, in a Fixed Effect Model (FEM), it may vary among individual firms. The slope coefficients of the regressions are assumed by FEM to be constant across time.

Random effects model (REM)

$Y_{it} = \beta 1_{it} + \beta 2X2_{it} + \beta 3X3_{it} + \mu_{it}$

Y =dependent variable, X=explanatory variable, *i* = cross section unit, *t* = the time period.

The intercept can vary over time and across different companies in the Random Effects Model (REM), making the model time-independent. This model presupposes that regression slope coefficients vary over time.

Model Estimation

In accordance with the empirical work of Bhren and Strm (2010), the researcher will modify the following econometric models for the current study:

$$ROA_{it} = \alpha + \beta 1\ BOARD\ SIZE_{it} + \beta 2\ BOARD\ COMPOSITION_{it} + \beta 3\ FIRM\ SIZE_{it} + \beta 4\ FIRM\ AGE_{it} + \varepsilon_{it}$$

Where:

ROA = Financial Performance of Firms (accounting-based: ROA)

α = Constant, i = entity, t = time, β = Regression coefficient (the slope, or the change in Y for any corresponding change in one unit of X).

ε = Within-entity error.

CHAPTER FOUR

DATA PRESENTATION, DISCUSSION AND ANALYSIS

1ntroduction

This chapter contains data analysis, discussions and a presentation of the result. The study used data from 30 companies which are both manufacturing and service companies. The data was retrieved from these companies covering the year 2006 to 2018. The pooled Ordinary Least Square and the Generalised Least Square were used as the econometric models based upon which the results are generated. The section, therefore, presents the result of the descriptive statistics based on 395 data sets. This was followed by the correlation result and the comparison of the service and manufacturing companies used in the study.

4.1 Descriptive Analysis and Summary

Descriptive statistics, such as frequency distribution and tables, were used in the study. This was used in analyzing board gender and Firm Performance of manufacturing and service companies in Ghana. The standard deviation, mean size, minimum and maximum as well as skewness and kurtosis were done using descriptive statistics.

The summary of the descriptive statistics is presented in table 4.1 below:

Table 4. 1: Descriptive Statistics for Manufacturing and Services Companies

VARIABLE	**OBS**	**MEAN**	**STD. DEV**	**MIN**	**MAX**
ROA	395	.121497	.2164227	5.76e-06	2.954348
Blau Index	395	.1675559	.6778847	-12.85207	.5
PWD	395	.1383824	.1234816	0	.5

Board size	395	8.916456	3.448034	2	18
Firm Size	395	15.10891	2.816699	5.214936	24.54673
Firm Age	395	40.14177	23.62031	12	122

Source: Selected Manufacturing and Service companies in Ghana.

Note: Variables ROA (Return on Asset), FS (Firm Size), PWB (Percentage of Women on Board).

From Table 4.1 above, the ratio of the average performance value which was measured by ROA is .121497. This means that the selected manufacturing and services companies generated around 12% net return on assets. The maximum value as shown in the table is 5.76e-06 and the minimum value according to the table is 2.954348. The result shows a standard deviation of .2164227 indicating that there is moderate variability across chosen manufacturing and service firms in Ghana.

According to the result as presented in the table, it records .1675559 as the average ratio of the Blau index as a measure of gender diversity. The result explains that the selected companies in the study are having an average Blau index of .1675559. With this, the maximum value is .5. The minimum value is also -12.85207. The result also displays a standard deviation (SD) of .6778847. The average value reflects the fact that there is a fair amount of diversity among the chosen companies.

The result in table 4.1 also shows .1383824 as the average proportion of women present on boards. The minimum value to this is .0 whereas the maximum value is .5. The standard deviation (SD) to this effect is .1234816 from the average value. This is the reflection of the presence of moderate variation. This high rate of female enrollment in the tertiary education of Ghana (average GPI of

0.64 between 2006 to 2018) is not reflective on the number of women on the board of the selected manufacturing and service companies as women averagely represented just 13.8% of the total board members.

Board size according to the table records an average value of 8.916456. This is to mean that, the selected manufacturing and service companies selected for the study are having average board size to be 9 persons. According to the result as presented, the maximum value is 18 and the minimum value is also 2. The result further shows SD of 3.448034 indicating that there is moderate variability across chosen manufacturing and service firms in Ghana.

Firm size records an average value of 15.10891. This result is based on the annual reports of the selected companies and it is to mean that they are having bigger size. This follows with the maximum value of the number of years selected to be 24.54673. The minimum value also shows 5.214936. There is also a SD of 2.816699 from the average firm size. This means that there is a moderate dispersion among the selected companies.

Firm age according to the result as presented in the table shows an average of about 40 years. This is to mean that the selected companies have been operating for quite a long time. The maximum age according to the table is 122 and the minimum age is 12. The standard deviation to this result is 23.62031. This is reflecting the presence of moderate variation.

Table 4. 2: Descriptive Statistics for Manufacturing Companies only

VARIABLE	**OBS**	**MEAN**	**STD. DEV**	**MIN**	**MAX**
ROA	182	.1681627	.1926297	.006318	1.802654
Blau Index	182	.2108735	.1688167	. 0	.48

PWD	182	.1402694	.1234541	. 0	.4
Board size	182	7.835165	3.108583	3	15
Firm Size	182	14.64679	2.861769	9.746015	22.56901
Firm Age	182	42.92857	16.03726	14	60

Source: Selected Manufacturing companies in Ghana.

As presented in Table 4.2 the average value of the performance ratio which was measured by ROA is .1681627. This means that the selected manufacturing generated around 16.8% net return on assets. The maximum value as shown in the table is 1. 802654 and the minimum value according to the table is 0.006318. The result shows a standard deviation of 0.19 26297 indicating that there is moderate variability across chosen manufacturing and service firms in Ghana.

According to the result as presented in the table, it records 0.21 as the average ratio of Blau index. The result explains that the selected companies in the study are having an average Blau of 0.2108735. With this, the maximum value is 0.48. The minimum value is also 0.00. The result also shows a standard deviation (SD) of 0.1688167. The average value is a reflection of the presence of moderate variation among the selected companies.

The result in table 4.2 also shows 0.1402694 as the average proportion of women present on boards. The maximum value of this is 0.400 whereas the minimum value is 0.00. The standard deviation (SD) to this effect is 0.1234541 from the average value. This is the reflection of the presence of moderate variation.

Board size according to the table records an average value of 7.835165. This is to mean that, the selected manufacturing companies for the study are having average board size to be 8 persons.

According to the result as presented, the maximum value is 15 and the minimum value is also 3. The result further shows SD of 3.108583 indicating that there is moderate variability across chosen manufacturing and service firms in Ghana.

The mean value recorded for the Firm size is 14.64679. This result is based on the annual reports of the selected companies and it is to mean that they are having bigger size. This follows with the maximum value of the number of years selected to be 22.56901. The minimum value also shows 9.746015. There is also a SD of 2.861769 from the average firm size. This means that there is a moderate dispersion among the selected companies.

Firm age according to the result as presented in the table shows an average of about 43 years. This is to mean that the selected companies have been operating for quite a long time. The maximum age according to the table is 60 and the minimum age is 14. The standard deviation to this result is 16.03726. This is reflecting the presence of moderate variation.

Table 4. 3: Descriptive Statistics for Services Companies only

VARIABLE	**OBS**	**MEAN**	**STD. DEV**	**MIN**	**MAX**
ROA	213	.081623	.2278206	5.76e-06	2.954348
Blau Index	213	.1305428	.9092353	-12.85207	.5
PWD	213	.1367701	.123773	0	.5
Board size	213	9.840376	3.461767	2	18
Firm Size	213	15.50377	2.722633	5.214936	24.54673
Firm Age	213	37.76056	28.37142	12	122

Source: Selected Services companies in Ghana.

As presented in Table 4.3 the average value of the performance ratio which was measured by ROA is 0.081623. This means that the selected service companies generated around 8% net return on assets. The maximum value as shown in the table is 2.954348 and the minimum value according to the table is 5.76e-06. The result shows a standard deviation of 0.2278206 indicating that there is moderate variability across chosen manufacturing and service firms in Ghana.

According to the result as presented in the table, it records an average ratio of Blau index to be 0.1305428. The result explains that the selected service companies in the study are having an average Blau of 0.13. With this, the maximum value is 0.50. The minimum value is also -12.85207. The result also shows a standard deviation (SD) of 0.9092353. The average value is a reflection of moderate variability across chosen firms in Ghana

The result in table 4.3 shows also 0.1367701 as the average proportion of women present on boards. The maximum value of this is 0.50 whereas the minimum value is 0.00. The standard deviation (SD) to this effect is 0.123773 from the average value. This is the reflection of the presence of moderate variation.

Board size according to the table records an average value of 9.840376. This is to mean that, the selected service companies for the study are having average board size to be 10 persons. According to the result as presented, the maximum value is 18 and the minimum value is also 2. The result further shows SD of 3.461767 indicating that there is moderate variability across chosen manufacturing and service firms in Ghana.

The mean value recorded for the Firm size is 15.50377. This result is based on the annual reports of the selected companies and it is to mean that they are having bigger size. This follows with the

maximum value of the number of years selected to be 24.54673. The minimum value also shows 5.214936. There is also a SD of 2.722633 from the average firm size. This means that there is a moderate dispersion among the selected companies.

Firm age according to the result as presented in the table shows an average of about 38 years. This is to mean that the selected service companies have been operating for quite a long time. The maximum age according to the table is 122 and the minimum age is 12. The standard deviation for this result is 28.37142. This is reflecting the presence of moderate variation.

4.2 Correlation Matrix

The direction and strength of the relationship between two variables are provided by the correlation coefficient. The coefficient sign gives an indication of the path through which the variables are correlated. A correlation test is perfomed in determining whether collinearity exists between variables. Multicollinearity occurs when the explanatory variables are highly related. This makes it problematic to conclude how they influence the dependent variable. The correlation matrix for all study variables is displayed in Table 4.4.

Table 4. 4: Correlation Matrix

Variable	ROA	Blau index	PWD	Board Size	FS	Age
ROA	1.0000					
Blau index	0.0131	1.0000				
PWD	-0.0632	0.2286	1.0000			
Board Size	-0.2011	-0.0323	0.1885	1.0000		
Firm Size	-0.2432	0.0088	0.0081	0.1930	1.0000	
Firm Age	0.0479	-0.0465	0.1470	0.1586	0.0308	1.0000

SOURCE: Selected Manufacturing and Service firms in Ghana.

Note: Variables ROA (Return on Asset), FS (Firm Size), PWB (Percentage of women on the board).

The correlation table shows how the relations between the independent variables. The correlation coefficient shows values below 0.8 which is an indication of a stronger relationship among the independent variables which is a representation of multicollinearity (Gujarati and Porter, 2009).

According to table 4.4, ROA shows a positive correlation with the Blau index and firm age with a coefficient of correlation of 0.0131 and 0.0479 respectively. Blau shows a positive correlation with the proportion of women on board and firm size for a coefficient of correlation of 0.2286 and 0.0088 respectively. With co-efficient of correlation of 0.1885, 0.0081, and 0.1470, the proportion of women on the board is positively correlated with board size, firm size, and firm age. Board size is positively correlated to firm size and age, with correlation coefficients of 0.1930 and 0.1586, respectively. Firm size is positively correlated with age, with a correlation coefficient of 0.0308.

ROA has a negative correlation with all three of the following factors: the proportion of women on the board, the size of the board, and the size of the firm. The respective correlation coefficients are -0.0632, -0.2011, and -0.2432. The Blau index has a negative correlation with both the size of the board and the age of the firm, with a respective coefficient of correlation of -0.0323 and -0.0465.

4.3 Empirical Analysis

This section presents the result of the panel data regression analysis. The data is derived from the annual result of some selected listed and unlisted companies in Ghana. The study used Return on Asset (ROA) as the dependent variable to measure the performance of the firms. The main

independent variable was identified as the Blau index, the proportion of women on the board, and board size. The controlled variables included firm size and age.

4.4 Specification Model

The researcher used Stata version 12, software for the analysis of the study. The ROA was used to measure the financial performance of the selected firms. The Blau index, the proportion of women on the board and board size were used as the main independent variables. The controlled variables included firm size and age.

4.5 Diagnostic Tests Result

This section provides a test for the linear regression model (CLRM) assumptions including the multicollinearity and normality tests. The linearity of the parameter is assumed. These tests helped in predicting how the variables are related (Brooks, 2008). The tests were conducted to avoid misspecification of data to enhance research quality.

Normality test

In applying the model that can be used to test the significance of slopes and to also help to analyze the regression result, a normality test is conducted. This is to enhance the realities of research and to avoid misspecification of data. The distribution takes the form of a symmetric bell-shaped curve. The standard normal distribution is 1 with a mean of less than 1 and a standard deviation of less than 1. As the number of observations made is large, it can be considered to be a normal distribution.

The table 4.5 presents the normality test. The result from the table shows ROA to have both Kurtosis and skewness values of 0.0000. This is statistically significant at the 0.00 level, which suggests that the distribution is normal. Blau/ index also records 0.000 and 0.0000 respectively as

its skewness and Kurtosis values. This is also significant at 0.00. This also means that they are distributed normally. The proportion of women further shows a value of 0.0000 and 0.0000 respectively. The values are also significant at 0.00. This implies it is distributed normally. Board size records skewness values of 0.0001 and Kurtosis value of 0.6810. The value is significant at 0.00. This also shows a normal distribution. The firm size records a skewness value of 0.0013. It also records a Kurtosis value of 0.0018. The results are significant at 0.00. The values imply that there is a normal distribution. Age has both skewness and kurtosis value of 0.0000. This is statistically significant at the 0.00 level, which suggests that the distribution is normal.

Table 4. 5: Kurtosis / Skewness test for Normality

Variable	Observations	Pr (Skewness)	Pr (Kurtosis)	Adj chi2 (2)	Prob> chi2
ROA	395	0.0000	0.0000		0.0000
Blau index	395	0.0000	0.0000		0.0000
PWD	395	0.0000	0.0000	69.58	0.0000
Board size	395	0.0001	0.6810	14.17	0.0008
Firm Size	395	0.0013	0.0018	17.13	0.0002
Firm Age	395	0.0000	0.0000		0.0000

Source: Selected Manufacturing and Services companies in Ghana.

Heteroscedasticity Test

In the presence of heteroskedasticity, the independence of the OLS property and the consistency of parameter estimations are called into question (Bedru and Seid, 2005). Given the presence of heteroskedasticity, the OLS estimate produces results that are unreliable and erroneous. The Breusch-Pagan/ Cook-Weisberg Test for Heteroskedasticity is used in this study, and the null hypothesis is that the error variances are all identical, as opposed to the alternative hypothesis that

they rise (drop) as the predicted values of the dependent variable grow. The ROA variable exhibits Heteroskedasticity, and the test rejects the null hypothesis of no heteroskedasticity at a significance level of 0 percent in each instance, as shown in Table 4.6.

Table 4. 6: Breusch-Pagan/ Cook-Weisberg Test for Heteroskedasticity

chi2(1)	= 15.41
Prob > chi2	= 0.00011

Source: Selected Manufacturing and Services companies in Ghana.

Multicollinearity Test

The p-values of variables are increased by multicollinearity, making them statistically significant (Ahmad and Bashir, 2013). There is a lot of correlation between the independent variables. The outcome of the correlation matrix test might be interpreted as a positive or negative indication of a perfect correlation between the variables. When the coefficient of determination is zero, a linear connection cannot be established. the coefficients are less than 0.8 which indicates no Multicollinearity issue with the variables.

4.6 Model Specification

Hausman Specification Test

The model was applied to analyze the effects of the Blau index, the percentage of women on boards, the board size, firm size (FS), and age on ROA for a sample of Ghanaian manufacturing and service firms. Specification tests are performed so that the right models can be chosen. On the other hand, random effects tend to be associated with the independent variable. Gujarati (2004) claims that the use of a fixed effect is preferable when the null hypothesis is not rejected, while the use of a random effect is preferable when the null hypothesis is rejected. The use of random effects is compatible with both the null and the alternative hypotheses. When the P-value is

insignificant, the null hypothesis is accepted as the decision rule for the Hausman Specification test. The data in table 4.7 indicate that the random effect model is appropriate for the data.

Table 4. 7: Hausman Test for Fixed or Random Effects

	(b) **Fe**	**(B)** **Re**	**(b-B)** **Difference**	**sqrt (diag(V_b-V_B))** **S.E.**
Blau index	.0057942	.0057942	0	0
PWD	-.0824357	-.0824357	0	0
Board size	-.1076465	-.1076465	0	0
Firm Size	.0089517	.0089517	0	0
Firm Age	.000698	.000698	0	0

Source: Listed and selected unlisted companies in Ghana

4.7: Presentation of Results

Table 4. 8: Regression Results of Manufacturing and Services companies: ROA dependent variables

ROA	**COEF.**	**STD.** **ERR**	**Z**	**P^|Z|**	**[95%** **CONF.**	**INTERV** **AL**
Blau index	.008026	.0159343	0.50	0.615	-.0233022	.0393542
PWB	-.086646	.0896317	-0.97	0.334	-2628692	.0895773
Board size	-.0102792	.0031827	-3.23	0.001	-.0165367	-.0040218
Firm Size	-.0164579	.0037844	-4.35	0.000	-.0238984	-.0090174
Firm Age	.0008143	.0004527	1.80	0.073	-.0000757	.0017043
_cons	.4397703	0613037	7.17	0.000	.3192423	.5602984

SOURCE: Selected Manufacturing and Service companies in Ghana.

The regression proves to be statistically significant at 0.05 for each performance ratio assessed by Return on Assets (ROA). From table 4.8 above, the Blau index of the selected manufacturing and services companies in Ghana is positive but statistically insignificant at 0.615. This implies that there is no significant relationship between the Blau index and the profitability of selected manufacturing and services companies in Ghana. The proportion of women on the board has a negative coefficient and it is statistically insignificant at 0.334 This implies that there is no relationship between the proportion of women on the board and profitability measured by the ROA of manufacturing and services companies. This finding is contradictory to Choon et al. (2013) who established a positive relationship between profitability and the proportion of women on the board, implying the more profitable a firm becomes, the higher the proportion of women on the board.

The board size of the manufacturing and services companies has a negative coefficient and it is statistically significant at 0.001 This implies that the lesser the board size, the more profitable selected manufacturing and services companies in Ghana become which is consistent with the findings of Carter, N.M., and Wagner, H.M., 2011). At a lower Board size, the selected unlisted companies used for the study become more profitable.

The coefficient of Firm Size is negative but significant at 0.000. This implies that there the smaller the firm size, the more profitable the selected companies in Ghana. This finding agrees with the findings of Bonfim and Kim (2012) who established a negative relationship between firm size and profitability, implying that the smaller the size of the bank the more profitable companies become.

Firm Age has a positive coefficient and it is statistically insignificant at 0.073. This implies that there is no relationship between the profitability of selected companies in Ghana and their ages.

The above table shows acceptance of the null hypothesis for age and profitability measured by ROA. This finding contradicts Bonfim and Kim (2012) who established a negative relationship between age and profitability, implying that the higher a firm age the more profitable companies become.

Table 4. 9: Regression Results of Services companies: ROA dependent variables

ROA	COEF.	STD. ERR	Z	P^|Z|	[95% CONF.	INTERVAL
Blau index	.0012958	.0162669	0.08	0.937	-.0307743	.0333659
PWD	.0611003	.1466454	0.42	0.677	-.2280096	.3502103
Board size	-.015896	.0047254	-3.36	0.001	-.025212	-.00658
Firm Size	-.0290474	.005358	-5.42	0.000	-.0396106	-.0184841
Firm Age	-.0002768	.000569	-0.49	0.627	-.0013986	.0008449
_cons	.6903174	.0980811	7.04	0.000	.4969514	.8836834

SOURCE: Selected Services Companies in Ghana.

The regression proves to be statistically significant at 0.05 for each performance ratio measured by Return on Assets (ROA). From table 4.9 above, the Blau index is positive but statistically insignificant at 0.937. This implies that there is no relationship between the Blau index and profitability. This result is unusual because theoretically Blau index is expected to have a negative relationship with the firm's profitability.

From table 4.9 above, the Proportion of women on the board is positive but statistically insignificant at 0.677. This implies that there is no relationship between the proportion of women on the board and profitability. This result is inconsistent with Jensen (1986) which revealed that if

companies have a higher proportion of women on the board the more profitable firms become (ROA).

Board size has a negative coefficient but it is statistically significant at 0.001. This implies that there is an inverse relationship between profitability measured by ROA and the Board size of services companies in Ghana.

Firm Size has a negative coefficient and it is statistically significant at 0.000. This implies that there is an inverse relationship between the firm size of selected services companies in Ghana and profitability.

Firm Age has a negative coefficient and it is statistically insignificant at 0.627. This implies that there is an insignificant relationship between age and profitability.

Table 4. 10: Result of manufacturing: ROA dependent variables

ROA	**COEF.**	**STD. ERR**	**Z**	**P^|Z|**	**[95% CONF.**	**INTERVAL**
Blau index	-.0375595	.563002	-0.07	0.947	-1.148663	1.073544
PWD	.1988743	.7831797	0.25	0.800	-1.346758	1.744506
Board size	-.0041281	.0050341	-0.82	0.413	-.014063	.0058069
Firm Size	-.0082464	.0054984	-1.50	0.135	-.0190977	.0026049
Firm Age	.0034544	.0010335	3.34	0.001	.0014147	.005494
_cons	.1530238	.0809407	1.89	0.060	-.0067154	.312763

Source: Selected manufacturing companies in Ghana.

The regression proves to be statistically significant at 0.05 for each performance ratio. From table 4.10 above, the Blau index is negatively and statistically insignificant at 0.947. This implies that there is no relationship between the Blau index and profitability. This result is unusual because theoretically Blau index is expected to have a negative relationship with the firm's profitability. This result is inconsistent with Jensen (1986) which revealed that if companies have a lower Blau index the more profitable firms become (ROA).

From table 4.10 above, the Proportion of women on the board is positive but statistically insignificant at 0.800. This implies that there is no relationship between the proportion of women on the board and profitability. This result is inconsistent with Jensen (1986) which revealed that if companies have a higher proportion of women on the board the more profitable firms become (ROA).

Board size coefficient is negative and insignificant at 0.413. This indicates that there is no relationship between profitability measured by ROA and the Board size of selected manufacturing companies in Ghana.

The coefficient for Firm Size is negative and insignificant at 0.135. This implies that there is no relationship between the firm size of selected manufacturing companies in Ghana and profitability.

Firm Age has a positive coefficient and it is statistically significant at 0.001. This suggests that there is a significant relationship between age and profitability. This finding agrees with Bonfim and Kim (2012) who established a positive relationship between firm age and profitability. This implies that companies that have been operating for longer age tend to be more profitable.

4.8. Discussion of Results

In this section, the effect of each variable used in this study is discussed and analyzed based on the theoretical predictions, and prior empirical studies.

Blau index

As presented in table 4.8, panel data result for the analysis method of random effect model results showed an insignificant and a positive effect on the profitability of Manufacturing and Services companies in Ghana with a regression coefficient of P- value of more than 0.05. This result can be interpreted as having no relationship between Blau index and profitability.

Contrary to the above-mentioned findings, Contrfary et al (2012), established a negative relationship between Blau index and ROA (profitability), suggesting that the lower the Blau index the more profitable firms become.

Proportion of Women on Board

As presented in table 4.8, panel data results for the analysis method of random effects model results proportion of women on the board showed an insignificant and a positive effect on the profitability of selected manufacturing companies and services companies in Ghana when separated. The proportion of women on the board showed a negative and insignificant impact on the profitability of the combined selected manufacturing and services companies in Ghana. This finding may be construed to suggest that the profitability of some manufacturing and service firms in Ghana is negatively impacted by the presence of a greater number of women on boards. This conclusion, on the other hand, contradicts the findings of Choon et al. (2013), who found that the proportion of women serving on boards of directors had an effect on profitability.

Board size

As we have seen from the analysis, this study reveals that Board size showed a negative significant effect on the firm performance of selected manufacturing and services companies in Ghana. The panel random effect estimation regression result shows a negative and significant relationship between selected manufacturing and services companies in Ghana and the performance ratio. It has a coefficient and p-value greater than 0.05. This conclusion supports Paul M. Guest (2009) who discovered that the negative relationship is strongest for major UK firms with larger boards, and his findings supports the premise that problems with poor communication and decision-making weaken the effectiveness of large boards. This supports the studied done by David Yermack (1996) who found that firms with smaller boards had better financial ratios and gave their CEOs more performance incentives in the form of pay and the possibility of dismissal. Large boards have been called into question for their ineffectiveness due to communication and decision-making issues, as stated by Lipton and Lorsch (1992) and Jensen (1993). The evidence seems to back up this hypothesis.

The appointment of directors on manufacturing and service company boards is problematic in Ghana. The reason for this is that people are rarely chosen for positions on boards based on their efficiency and competence, but rather their loyalty to those in power or simply as a form of decoration. Moreover, research done by Agyemang and Castellini (2013), only few corporations take the time to properly introduce and orient new board members. Newly-appointed directors should get a formal way of orientation into the business of the organisation. Due to this, board members are less effective because they cannot influence the firm's performance in the ways that are necessary.

Firm Size

Firm size and profitability as measured by ROA of selected manufacturing and service companies in Ghana have a negative and no relationship. This is due to a regression coefficient with a P-value greater than 0.05. Based on our trade balance, Ghana is largely import dependent, which affects the production of most manufacturing firms, creating competition between imported and domestically manufactured products. As a result, Ghana's strong growth rate is due to taxes collected on imported goods rather than to the profitability of manufacturing firms. According to our findings, a negative significant relationship between firm size and profitability means that the larger the firm size, the lower its profitability, which could be due to the higher operation costs and salary bill that the firm must incur as a result of its larger size.

Firm Age

Firm Age has an insignificant and a positive relationship with the profitability of Ghanaian manufacturing and service enterprises as measured by ROA.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

Introduction

This chapter summarizes the study's conclusion and makes pertinent recommendations for the study. In addition, the paper offers suggestions for further research in this area.

Conclusion

The primary purpose of this study was to investigate board gender diversity and Firm Performance for Ghanaian manufacturing and service firms.

Thirty companies in the manufacturing and service services were analysed using panel data regressions for the period between 2006 and 2018 fiscal years. In this case, researchers had access to twelve years' worth of manufacturing services from the thirty manufacturing and service companies included in the analysis. This research project used an empirical approach to analyse the implication of the theory of gender diversity and Firm Performance for Ghanaian manufacturing and service companies. The board size, blau index and the percentage of women on the board were all shown to be independent variables in a regression model in which ROA served as the dependent variable. Theories of Corporate Governance and Firm Performance corroborated the study's findings. Based on the findings of the regression model, it can be concluded that ROA is an accurate indicator of the impact that the model under study has on the performance of Ghanaian companies and manufacturing services.

Comparing the manufacturing to the services firms, the research showed that manufacturing firms are more profitable with an average ROA of .1681627 than that of the services firms with and average ROE of 0.081623. It also showed that there is a higher Proportion of Women on Boards

in the manufacturing firms with an average of .1402694 than that of the services firms with an average of .1367701

-Board Size: Board size has a negative and significant effect on the performance of selected Ghanaian manufacturing and service companies. The regression analysis reveals a negative and statistically significant relationship between the variables, as indicated by a coefficient of and a p-value less than 0.05

-Firm Size: There is a negative and significant relationship between firm size and profitability measured by the ROA of selected manufacturing and services companies in Ghana. With a regression coefficient of P-value of less than 0.05, implying there is an inverse relationship between Firm Size and profitability.

Recommendation

The following suggestions are based on the aforementioned findings and discussions.

1. A proactive policy to guide the proportion of women on the boards of manufacturing and service companies.

Women's contributions to a company's performance are substantial enough to warrant their representation on the board of directors. However, the research is not clear as to the exact number of women that are to be present to enable effective and efficient performance, therefore companies should be guided by the number of female participants, since there may be an inverse relationship between female presence and performance based upon the number of female involvements.

2. Effective board of directors for manufacturing and services firms

All corporations ought to have a functional board of directors. A well-run organization that's headed in the right direction is a sure sign that its governing body is doing its job. The exercise of authority over corporations is another area of focus for corporate governance experts. There can be no effective leadership without everyone pulling their weight.

3. To improve decision-making, women should be encouraged to gain the necessary knowledge and expertise for the board.

Women ought to participate in pertinent training programs and seminars to gain the knowledge necessary to compete with their male counterparts, and they ought to be encouraged to offer their potential towards a critical decision.

4. Laws to protect indigenous companies

The government should enact local legislation to restrict the importation of certain products that can be created locally. This is done to protect local manufacturers because they will have a broader market to trade with.

Areas for further studies

The study has laid some groundwork to explore board gender diversity and firm performance. Future researchers should examine and compare the nature of duties taken by male and female that relates to the financial performance of corporations. Future work is required to further study and consider data within the regions of Ghana and from both Manufacturing and Services companies for the current years. This will give a more reliable and true representation of the impact of women on board and the performance of Manufacturing and services companies in Ghana.

Abstract

이사회 성별 다양성 및 재무 성과:
- 가나에 있는 제조 및 서비스 회사의 증거-

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본 연구의 목적은 성별 다양성이 가나에서 선택된 제조 및 서비스 기업의 성과에 어떤 영향을 미치는지 조사하는 것이다. 표본에는 가나 보안 및 교환 위원회의 179인 1969년 회사법에 따라 등록된 제조 및 서비스 사업자 30개가 포함될 것이다.

이 프로젝트는 2006년부터 2018년까지 360개 기업의 패널 데이터를 산출한다. 이 연구는 가나의 일부 서비스 및 제조 회사의 여성 이사회 구성원 비율을 조사하고, 해당 회사의 이사회에서 여성의 개별적인 역할을 확인하며, 가나의 해당 회사가 재정적으로 어떻게 수행하는지 조사하고자 합니다.

자산 수익률(ROA)은 종속 변수가 되며, 이는 선택된 조직의 재무 성과를 평가하는 데 사용됩니다. 독립 변수는 이사회 성별 다양성(블라우 지수에 의해 정의됨)과 이사회 여성 비율이 될 것이다. 기업 규모와 기업 연령이 통제 변수가 될 것이다. 풀링된 일반 최소 제곱법이 측정(OLS)에 사용됩니다. STATA 소프트웨어를 사용하여 회귀 분석을 실행하고 분석, 결론 및 권장 사항을 수행합니다.

이전의 연구는 여성들이 회사의 성과에 상당한 기여를 한다는 것을 보여주었기 때문에 기업들이 여성들을 이사회에 포함시키는 것이 주요 정책 제안이 될 것이다.

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