**FIRM CHARACTERISTICS AND CORPORATE SOCIAL RESPONSIBILITY IN NIGERIA**

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**IGBINEDION UNIVERSITY, OKADA**

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**BEING THESIS PRESENTATION TO THE DEPARTMENT OF ACCOUNTING, MALLAM SANUSI LAMIDO SANUSI COLLEGE OF BUSINESS AND MANAGEMENT STUDIES IGBINEDION UNIVERSITY, OKADA**

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**ABSTRACT**

The study examines the impact of firm characteristics on corporate social responsibility: the moderating role of firm life cycle in quoted non-financial firms in Nigeria. The ex-post facto research design was used in this research alongside the positivism research philosophy. The population of the study comprises of all non-financial firms quoted on the floor of the Nigerian Stock Exchange. The sample for the study is 73 companies which have available and accessible annual reports that covers the study period. The method of sampling was done using the simple random sampling technique. Secondary data was used for this study. The data were retrieved from corporate annual reports of the sampled quoted on the Nigeria Stock Exchange companies for the period 2010-2019 financial years. This study employed descriptive statistical methods and will includes descriptive techniques such as the mean, standard deviation, range, frequency distribution. More importantly, the random effects (RE) and fixed effects (FE) regression was estimated. Panel data regression is chosen because of the multidimensional nature of the data which has both time or periodic dimension and also cross-sectional dimension. The findings of the study reveals that (i) an increase in the firm size results in a decline in CSR disclosures. (ii) that the older the firms gets, the lower the CSR disclosures and hence younger firms tend to be characterized with increasing CSR disclosures (iii) an increase in the firm leverage results in a decline in CSR disclosures and hence highly levered firms can exhibit declining CSR disclosures. (iv) firms that are more profitable appear to disclose less of CSR information. (v) the type of industry and particularly environmental sensitive industries tend to significantly improve CSR disclosures. (vi) firm life cycle is a significant moderator of the extent to which the firm attributes affect CSR. In the light of the study findings, the following recommendations are suggested. Firstlyy, the study recommends that though CSR disclosure is voluntary, there is the need to ensure that firms of all sizes are held accountable for ensuring social responsibility. Secondly, the study recommends that institutional bodies such as the Financial Reporting Council of Nigeria and Securities and Exchange commission can entrench CSR disclosure practices for older firms that may display tendencies for reduced CSR. Thirdly, the study recommends that highly levered firms can build and sustain creditor confidence by improving their disclosure practices with emphasis also on CSR. Hence, it is in the best interest of highly levered firms to dispel the perception of information asymmetry that reduced disclosures could signal. Fourthly, the study recommends that CSR and profit maximization should not occur at an opportunity cost of each other and both can actually occur simultaneously which is now the mainstream philosophy.

**Keywords:** Corporate Social Responsibility (CSR), Firm Size, Firm Leverage, Firm Attributes, Firm Age, Firm Profitability, Firm Industry Type, Firm Life Cycle, Firm Characteristics Variable, Nigeria Stock Exchange, Cost Benefits Analysis and Panel Regression Analysis.

# Word Count: 450

**CHAPTER ONE INTRODUCTION**

# Background to the Study

Corporate social responsibility (CSR) have become a key business practice, to the extent that they now report one of the most important reporting issues in global business environments (Meynhardt & Gomez, 2019; Panda, D'Souza, & Blankson, 2019). According to Foran (2001) Corporate Social Responsibility can be defined as the set of practices and behaviors that firm adopt toward their labour force, toward the environment in which their operations are embedded, toward authority and towards civil society. The focus of firms on CSR reporting has come on the heels of increased criticism of financial reporting failing to adequately satisfy the informational needs of all stakeholders who wish to assess a company’s past and future performance, because it only provides a partial account of business activities, ignoring the social impact made by an entity (Flower, 2015). As a consequence, there have been calls for enhanced reporting on corporate responsibility. According to Tamvada (2020) there is an overall dissatisfaction with the mechanism of conventional accounting and its practices, the application of which results in unfavourable broader social consequences Consequently, the established consensus now is that there is an urgent need to expand the business reporting model especially with corporate social responsibility reporting issues in perspective. As a result, the number of companies disclosing their initiatives and performance with respect to social activities has grown.

Dahlsrud (2008) examined definitions of CSR, and suggests that the most common element of it is the acknowledgement of business having responsibility towards society or community while engaging in socially benefitting activities. CSR literature has widely acknowledged that

corporates and society are interlinked, and that corporates must act for the benefit of society. Historically, corporations took a step back during crises. However, as the role of business in society continues to evolve and stakeholder capitalism becomes mainstream, businesses are rising to the challenge. It’s encouraging to see how, even in the midst of challenging times, corporate social innovation is here to stay. Corporate social innovation encompasses the many ways that businesses can have a positive impact. Through philanthropy, corporations provide direct donations or in-kind support; through advocacy, corporations have the capacity to shape public policy; through corporate social responsibility programmes, corporations use their many resources toward the benefit of society; and through shared value creation (World Econonic Forum, (WEF), 2020)

However, a key recognition that must be brought forward within the push for robust corporate reporting model to incorporate social is the fact that corporate social resposbility is still largely voluntary and unregulated especially in developing economies. CSR has for most part remained voluntary (Lamarche & Bodet, 2018; Agudelo, Jóhannsdóttir & Davídsdóttir, 2019) and relied on self-regulation through codes of conduct with the decision to comply with the codes of conduct firmly within the forte of corporations (Bondy, Matten & Moon, 2008). It allows corporations flexible implementation and evaluation of the codes of conduct based on their choices. Therefore, given that CSR reporting is still largely voluntary by firms in Nigeria, it is clear that the decision to engage in and the report CSR information is largely discretionary and thus would be based considerable on cost-benefits evaluation by the firm. Consequenty, rigorous efforts have been made to explore the determinants of CSR , though Dabor and Dabor (2015)

and Soyinka, Sunday, and Adedeji (2017) have pointed out that in depth studies in this area is still in its infancy and there exist considerable inconsistent (Egbunike & Tarilaye 2017).

The aim of this research is to contribute to the debate on the role of firm charateristics attributes as a driver of CSR in listed firms in Nigeria but adopts an entirely different approach by introducing the moderating effect of firm life cycle. Firms develop over their life cycle, but there has been little research on how firms make strategic decisions over time. This study attempts to identify whether corporate social responsibility (CSR) activities differ by corporate life-cycle stage. While most CSR studies examine firm-level cross-sectional differences, the current study examines historical evolution by employing life-cycle approach. Leveraging corporate life-cycle models used in prior research, we expect that growth-stage firms are more likely to engage in CSR activities: firms in this stage require both a sound ethical reputation and strong financial performance, if they are to survive. They need to build trust with external stakeholders and also achieve the financial success essential to firms starting new businesses. Next, we have no predictions with respect to the CSR activities of mature-stage firms, firms that are less likely to increase their financial performance, as they already generate sufficient earnings; nevertheless, they know it is essential to maintain their ethical reputation. Therefore, we make no ex ante predictions, either positive or negative, with regard to this stage. However, we do expect decline-stage firms to be less likely to engage in CSR activities; rather, they are more likely to engage in more “extreme” adjustments, such as restructuring and mergers and acquisitions. Additionally, as firms’ slack resources are important determinants of investment in CSR activities, decline-stage firms will be unable to invest in CSR; therefore, we expect that demand for CSR should be the lowest at this stage.

# Statement of the Problem

Majority of studies on CSR has been focused on the drivers of social especially given the voluntary disposition. Hence, there has been a proliferation of studies investigating these drivers such as firm characteristics (Egbunike & Tarilaye, 2017; Welback, Owusu, Bekoe & Kusi, 2017, Gnanaweera & Kunori, 2018), corporate governance (Mgbame & Onoyase 2015, De Villiers & Naiker 2011; Larkin Bernardi & Bosco 2012; Muhammad and Sabo 2015) financial performance (Shaukat, Qiu & Trojanowski (2016), Gender Diversity (Ijas 2012; Prihatiningtias 2012; Harjoto, Laksmana & Lee 2015; Handajani, Subroto, Sutrisno & Saraswati 2014; Hyun, Yang, Jung & Hong 2016). The findings in their studies have been mixed and very much inconclusive. Though Dabor and Dabor (2015) and Soyinka, Sunday, and Adedeji (2017) have pointed out that in depth studies in this area is still in its infancy and there exist considerable inconsistencies.

However, looking only at firms characteristcs in order to undertand CSR of firms is gross inadequate, limited and shields a critical understanding of how firms actually behave. Firms behave differently at various life cycle stages exist. This study argues that the firm life cycle is probable to be an underlying construct that can be helpful in giving detailed heterogeneous results as regards CSR. In other words, this is to say that firms in a life cycle stage will possibly show distinctive CSR capacity and objective (Zhao & Xiao, 2018). Companies portray diverse strategies, structures, as well as decision-making processes at several phase of the

corporate life cycle. Thus, managers can establish their best possible CSR level by embarking on a cost–benefit analysis that depends on their firm’s life-cycle stage (Lins, Servaes & Tamawyo, 2017).

What is often the tradtion of numerous CSR studies in the Nigerian environment is simply run off to investigate firm-level characteristics and cross-sectional differences as determinants of CSR activities (Aliyu & Noor, 2015; Akanfe, Michael & Bose, 2017; Agudelo, Jóhannsdóttir & Davídsdóttir 2019; Dabor & Dabor, 2015; Ebiringa, Yadirichukwu, Chigbu & Ogochukwu, 2013; Muhammad & Jamilu, 2017; Ogole & Saniyo, 2018; Okoye & Adeniyi, 2018; Oyewumi, Ogunmeru & Oboh, 2018; Usman, 2019; Uwuigbe, 2011; Uwuigbe & Egide, 2012), to the best of our knowledge, we are not aware of a comprehensive study that has introduced the moderating role of firm life cyle in the relationship beteen firm charcateristics and CSR. This is the gap that this still intends to fill and thereby contribute to knowledge. Thus incorporating a life cycle dimension enables proper understanding of the period dynamics of the relationship (Owolabi 2010). As a result we can juxtapose the CSR practices against their life- cycle stages and thus be able to infer categorically at what stage in the life cycle did company A for example improve or decrease its CSR. Thus there is the need to provide a more comprehensive approach in the form of the life cycle dimension.

Though the idea of the moderating role of firm life cycle has bee receiving research attention from researchers in other climes such as Ahmed, Bikram, Ali, Grantley and Mostafa (2017) which examines the association between corporate social responsibility (CSR) performance and financial distress and additionally the moderating impact of firm life cycle stages for Australia, Woo and Seung (2018) examine whether a firm undertakes corporate social

responsibility (CSR) activities as a function of its life-cycle stage for China, Mostafa and Ahsan (2017) which examines the association between the corporate life cycle and corporate social responsibility (CSR) motivated by the resource-based theory, Tifanny and Yu-Chuan (2021) which exanine the moderating effect of firm life cycle on the relationship between firm profitability and CSR for Southeast Asia and Elsa, Annisaa and Rayna (2021) investigating the moderating role of firm life cycle on the relationship between financial distress and CSR for Indonesia. To the best of the researchers knowledge, the researcher is unware of any known study that has examined this relationship using listed Nigeria firms and herein lies the gap. This study therefore, will introduce firm life cycle as a moderating factor in the relationship between firm characteristics and CSR in Nigeria.

# Research Objectives

The broad objectives of the study are to examine the effect of firm characteristics on corporate social responsbiity; the mediating effect of firm life cycle in listed firms in Nigeria. The specific objectives are to;

1. examine the effect of firm size on corporate social responsibility of listed firms in Nigeria.
2. investigate the effect of firm age on corporate social responsibility of listed firms in Nigeria
3. evaluate the impact of firm leverage on corporate social responsibility of listed firms in Nigeria
4. determine the impact of firm profitability on corporate social responsibility of listed firms in Nigeria
5. identify the effect of firm industry type on corporate social responsibility of listed firms in Nigeria.
6. determine the moderating effect of firm life cycle on the relationship between firm characteristics and corporate social responsibility of listed firms in Nigeria.

# Research Questions

1. What is the effect of firm size on corporate social responsibility of listed firms in Nigeria?
2. Does firm age impact on corporate social responsibility of listed firms in Nigeria?
3. What is the impact of firm leverage social responsibility of listed firms in Nigeria?
4. How does the effect of firm profitability impact on corporate social responsibility of listed firms in Nigeria?
5. What is the effect of firm industry type corporate social responsibility of listed firms in Nigeria?
6. Does the the moderating effect of firm life cycle have a significant relationship between firm characteristics and corporate social responsibility of listed firms in Nigeria?

# Research Hypotheses

H01. Firm size has no significant impact on corporate social responsibility of listed firms in Nigeria.

H02. Firm age has no significant impact on corporate social responsibility of listed firms in Nigeria.

H03. Firm leverage has no significant impact on corporate social responsibility of listed firms in Nigeria.

H04. Firm profitability has no significant impact on corporate social responsibility of listed firms in Nigeria.

H05. Firm industry type has no significant impact on corporate social responsibility of listed firms in Nigeria.

H06.Firm life cycle has no significant moderating impact on the relationship between firm characteristics and corporate social responsibility of listed firms in Nigeria.

# Significance of the Study

The result of this study is expected to be relevant to different types of stakeholders. They are discussed thus;

# Shareholders

The financial statements provide a means by which both the local and foreign investors gain an understanding of the financial position and operating performance of the companies. Prior studies existed that investors see CSR information as very important in making investment decisions and hence demand adequate of such information. In addition, in this contemporary times, investors not only looking into the profit numbers that the company’s earn but also questioning about the impact of companies’ corporate social responsibility on their investment or return (Chek, et al, 2013). Hence, this question results the need for companies to voluntarily disclose their social activities on the financial statements. Therefore, the result of this study is expected to aid investors understanding about the determinants of corporate social responsibility financial statement in Nigeria.

# Government

The government is interested on the level of information disclose about the social responsibility to the society at large. This is because the level of social responsibility required or voluntarily provided to the society indicate how the companies respect the environment or

society where they are operating. Therefore, the result of this study is hoped to be paramount to the government to justify this crucial ethical behavior of the firms listed in Nigerian listed companies.

# Management

Every business organisations are willing to maintain goodwill about their business because it will help enhance their performance and value. The level of their social responsibility will tells on their level of ethical responsibility and how they respect the society where they operated. Therefore, the result of this study is intends to provide the factors that determine social responsibility which will be useful to the management for decision purpose.

# Debt-holders

Debt holders are partly owners of the firm but they received interest on their resources invested on the business. They required sufficient information about the level of social responsibility disclose in the financial reports to enable them make decision when assessing a firm’s ability to pay its debts as at when due. This is because a firm who does not respect the society where they operate may likely not pay their expected debts. Therefore, the result of this study is expected to provide useful information to the debt-owners on the factors that determine social responsibility financial statement on Nigeria listed firms.

# Researchers and Analyst

This study will also be extremely useful to other researchers and analyst who are interested in this research area as it will form a good foundation for subsequent studies to be carried out.

# Scope of the Study

The study examines the firm charcateristics and CSR disclosues: The moderating effect of firm life cycle in listed firms in Nigeria. The population of the study is all quoted companies listed in the Nigerian stock exchange and the time period is 2010-2019. The scope of variables for the study covers the dependent variable which is CSR and the key independent variable which is firm charcateristics. The firm life cycle is used as the moderating variable for the study.

# Definition of Operational terms

**Corporate Social Responsibility (CSR**)**:** CSR is widely accepted as a strategy used to assist organizations’ gain, maintain and increase their acceptance in the society wherein they operate as reflected in social-environmental .

**Firm Size:** Firm size in the context of this study is defined in relation to the asset size of the company.

**Firm Leverage:** Leverage one of the important items in the capital structure of companies and it provides a medium for corporate financing as firms borrow money in order to obtain the capital they require for operating their businesses. Leverage can either be short-term or long-term.

**Firm Age:** The most meaningful measure of firm age is the number of years since listing.

**Firm Profitability:** Profitability can simply be described as the firm’s ability to generate earnings by the efficient and effective utilization of available resources over a given period. It reflects the financial condition and achievement of a firm for a certain period of time

**Firm industry type:** This refers to the industrial classification of the company which could either be financial or non-financial in broad terms

**Firm life cycle:** The theory of life cycle takes the position that organizations are similar to other natural creatures and hence they are born and then they develop, grow into maturity and eventually die.

# CHAPTER TWO LITERATURE REVIEW

# Introduction

This chapter examines the conceptual framework, review of related studies and theoretical framework for the study.

# Conceptual Issues

The conceptual framework examines the key concepts of the study and it begins with the discourse on corporate social responsibility which is the dependent variable for the study and then firm structure variables which is the Independent variable.

# Corporate Social Responsbility

The role of corporate social responsibility (CSR) has continued to gain prominence since the origin of the concept in the 1970’s (Lu, 2012). CSR information is significant in the

‘greening’ of corporate accountability, through the of corporate strategies, policies and management systems geared towards minimising unfavourable environmental (and subsequently) social impact of business operations on the society (UNEP 2002). Within the framework of organisational legitimacy, CSR is widely accepted as a strategy used to assist organisations gain, maintain and increase their acceptance in the society wherein they operate as reflected in social-environmental (SED) (Tregida, Milne, & Kearins, 2007). The last 5-6 decades has seen CSR move from a much relegated aspect of corporate strategy as pioneered by the publication of Milton Friedman’s book; “capitalism and freedom” where Friedman (1970) specifically asserts that wealth should be the only force behind a company’s existence and that as a legal entity the concept of a “social responsibility” makes little sense. (Friedman, 1970). Now, there is a tremendous growth in the attention given to CSR as there is now an increasing argument for companies to be environmentally and socially responsible. Thus the new thinking is that the extreme view of Friedman, does not suffice for the new business environment that companies have found themselves and hence the need for an improved business model. The Harvard Business School strategy model has included CSR performance as a main element of strategy formulation (Husted & Allen, 2000).

Corporate Social Reporting has evolved over time. However, the changes, which have occurred over the years, are the result of several driving forces that have been both internal and external. One of the earlier and poinerring definitions of CSR is the view point of Carroll (1979) and he came up with a model that captures corporate social performance (CSP). The challenge of the corporate social responsibility model was its inability to be centrally accepted following the challenges faced in measuring the phenomenon. The inability to come up with a

general way of defining CSR has been a major controversy amongst scholars (Dahlsrud, 2006). Dahlsrud conducted an investigation in this regard by analysing 37 of the most popular definitions of CSR. Dahlsrud’s study came up with the conclusion that there are common grounds between all 37 definitions. In addition, Dahlsrud also developed five (5) dimensions of CSR by perusing several definitions with the aid of content analysis. These CSR definitions were made up of 37 definitions from 27 authors covering a span of 1980 to 2003. Several definitions of CSER today usually make reference to these dimensions.

Antonio and Heidi (2009) stated that the avalanche of ways CSR has been defined in academic journals, corporate reports and other sources indicates the concepts inherent weakness. They trace the lack of agreement on a single definition to lack of ingenuity or capacity on the part of the experts and different origins of this concept. They therefore, concluded that it was not possible to arrive at a consensus definition on CSER because of the interactions of ideas, facts, philosophy, history, society and the environment. The failure to arrive at a consensus definition was also attributed to the dynamic nature of the concept.

Matten and Moon (2004) opined that the inability of researchers to come up with a unified definition for CSR could be as a result of the divergent nature of its components (perhaps as a consequence of the distinct roles played by the firms in the society). CSR can then be described as the resulting outcome of internal and external factors reflected on the firm. This includes the responsibility of the firm to the society in general and to the various stakeholders. Therefore, the activities of the managers, owners or stakeholders can either impact or are impacted by the firm (Antonio & Heidi, 2009). CSR connotes the willingness of a company in showing accountability to its stakeholders. It requires that organisations find a

way to control the negative impacts of their economic, social and environmental activities in order that they take advantage of the benefits and jettison the pitfalls (Michael, 2013). In a similar vein, Wood (1991) opined that an understanding of the fundamentals of CSR shows that both society and business are intertwined as against being different entities.

. Van Marrewijk’s (2003) study on Concepts and Definitions of CSR reveal that the theory of a one-solution definition should be abandoned. He further stated that specific definitions matching the development, awareness and ambition levels of organizations should be accepted instead. The study therefore, described CSR as voluntary company activities which involve social and environmental concerns of business operations in their interaction with stakeholders. Hirigoyen and Poulain-Rehm (2015) stated that the idea behind these CSR definitions is that responsible citizenship is developed by companies (in terms of the economy and society). This can be achieved when economic, social, societal and environmental issues are considered in dealing with stakeholders (those in the organisations employment, customers, suppliers, regulators, NGOs, and the society in general). Therefore, the concept of CSER extends the economic and financial performance.

According to Lea, (2002) Corporate Social Responsibility (CSR) can be roughly defined as the concern in business operations, including environmental dealings with stakeholder. Corporate Social Responsibility is about businesses and other organization going beyond the legal obligations to manage the impact they have on the environment and society. In environmental particular, this could deals with how organization interact with tier employees, supplier, customer and the communities in which they operate, as well as the extent they attempt to protect the environment.

According to Foran (2001) Corporate Social Responsibility can be defined as the set of practices and behaviors that firm adopt toward their labour force, toward the environment in which their operations are embedded, toward authority and towards civil society. Andersen, (2003) defines corporate social responsibility broadly to be about extending the immediate interest from oneself to include one’s fellow citizens and the society one is living in and is a part of today, acting with respect for the future generation and nature.

According to Hopkins (2004), the concept of CSR implies the ethical behaviour of business towards its constituencies or stakeholders. CSR also connotes activities outside the legal framework that binds the company in pursuit of objectives which benefit the society in general (McWilliams & Siegel, 2001). The activities of CSR go beyond acts of charity. It involves taking up the responsibility to develop the society by envisaging plans for socioeconomic equity and consciousness on societal welfare (Khan, Khan, Ahmed, Ali, 2012). It is therefore, a character of volunteering and could be applied to economic and legal responsibilities (Mac & Calis, 2011). According to Michael, (2013), CSR involves deliberating on key issues that include the host community’s interest in the company’s decision-making process and enhancing the triple bottom line comprising people, planet and profit

According to Tamvada (2020) the voluntary nature of CSR has led to voluntary initiatives to meet obligatory responsibilities. Often, this voluntarism leads to core obligations being considered as mere instruments for serving businesses resulting in misleading perception of responsibility while raising questions on the effectiveness of CSR practices. The voluntary status accorded to CSR has impeded companies from taking proactive measures towards CSR.

Several initiatives were taken by international organizations to make CSR more effective. Some of the major developments include the United Nations Global Compact, Global Reporting, Transnational’s Draft Code, and Organisation for Economic Co-operation and Development (OECD) guidelines amongst others. The Global Compact provides a common platform for companies to report their CSR related policies and practices. It embeds many of the normative debates into its ambit (Berliner & Prakash, 2012) to make corporates more proactive in accepting their social responsibilities (Schembera, 2018). However, it is rooted in voluntary reporting that depends on the initiatives of the participating corporations. Berliner and Prakash (2012) point out the observations indicating that ‘not all Global Compact principles are covered with the same level of detail,’ that ‘there is a wide disparity with regard to information available per principle,’ and that ‘reported information is not comprehensive, communications on progress focusing more on commitments and management systems than on materiality, performance and achievements’.

Even the recent report submitted by corporations on Global Compact suggests that the situation has more or less remained the same till date. Unwittingly, the Global Compact has facilitated the process of corporations using it for ‘propaganda and logos of the initiative without having to comply with their commitments, or truly strive to improve their human rights records’ (Rivera, 2013). It lacks a proper monitoring mechanism and therefore, it is difficult to say if all the reporting corporations are actually implementing their CSR policies as reported. OECD provides mere guidelines for responsible business conduct but does not have a mechanism to verify if corporates adhere to those guidelines. Global Reporting Initiatives (GRI) were introduced as set of guidelines for producing voluntary sustainability reports worldwide on economic, environmental and social performance by businesses. These guidelines remain within

the ambit of voluntarism having no force of law and, thus, have similar limitations like the Global Compact for CSR practices.

Table 2.1. CSR Indicators and Proxy

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Human Resources | Shareholders | Customers | Suppliers | Public authorities |
| i.Staff composition | i.Capital stock | i.General | Supplier | Taxes and duties Relations with local authorities Codes of conducts and compliance with laws |
| ii.Turnover Equality of | formation | characteristics | manageme nt |
| treatment | ii.Shareholders’/ | ii.Market | policies |
| iii.Training iv.Working | partner’s pay | development | Contractu al |
| hours v. wages | Rating | iii.Customer | conditions |
| vi.Employee’s benefits | iii.Corporate | satisfaction |  |
| vii.Industrial relations | governance | iv.Customer loyalty |  |
| viii.Health and Safety | iv. Investor | v.Product/ |  |
| ix.Workers rights | relations | Services |  |
|  |  | information and |  |
|  |  | labelling |  |
|  |  | vi.Ethical & |  |
|  |  | Environment al |  |
|  |  | product & services |  |
|  |  | v. Promotional |  |
|  |  | policies |  |
|  |  | vi.Privacy |  |
| Community | Environment |  |  |  |
| i.Corporate giving | i.Energy |  |  |  |
| ii.Direct contribution | consumption |
| and intervention | ii.Material |
| iii.Stakeholder | emissions |
| engagement | iii.Environmental |
| iv.community | strategy |
| Corruption |  |
| prevention |  |

Source: Perrini (2005)

# Models of Corporate Social Responsibility (CSR)

Under this section on models of CSR, we discuss both external CSR which relates to the external environment of the organization and then Internal CSR which related to the internal environment such as staffs and employee.

# External CSR Models

**Community Development and Investment**

The last decade has witnessed expanded awareness among companies, especially multinational corporations, of their responsibilities toward the communities they impact, elaborated in the concept of Corporate Social Responsibility (CSR) CSR is the realization of business contributions to sustainable development goals. It refers to how business takes account of its economic, social and environmental impacts in the way it operates –maximizing the benefits and minimizing the downsides. CSR undertakings are the voluntary actions that business can take, over and above compliance with minimum legal requirements, to address both its own competitive interests and the interests of wider society. Partnerships between companies and local community is gaining recognition as a channel for building local community support, strengthening the company reputation, and gaining legitimacy or the social license to operate (Loza, 2004,). Partnerships can enable companies to be agents of building the capacity of their host communities. This can be accomplished by enabling local communities to make informed choices and take charge of their development needs. This is necessary to reduce dependency on the company or other development agents (Esteves & Barclay, 2011). Corporate-community partnership (CCP) involves contributing capital and human resources such as assets like land, time, skills and leadership in order to meet the socioeconomic needs of the community where the company carries out its business operations. It involves strategic and innovative ways in which

business interests can align with community interests so that there is a win–win solution to community problems and issues (Loza, 2004).

CCP is a broad concept and can refer to a wide range of activities like philanthropic activities done voluntarily or complex business and community partnerships that can also offer some financial benefits to the company (Idemudia 2014,). Liu, et. al., (2013), discussed the CCP concept under the descriptive, instrumental, and normative views of stakeholder theory and was able to establish that CCP works best in a network environment that enhances complementarity and social capital. According to Idemudia, (2014), oil and gas companies have adopted three major CCP strategies in dealings with their host communities across Niger Delta; they are traditional in-house corporate-community partnership model, the corporate-community foundation model and the global memorandum of understanding (GMOU)

# Traditional In-House Corporate-Community Partnership Model

Under this model, the companies through their community relations department govern and make decisions on matters of community relations and social investments like infrastructures. The primary interaction with the host communities is through the local elites, such as chiefs and elders, religious leaders, etc and so relies heavily on traditional authority for information flow (Idemudia 2014). Some of the advantages companies stand to enjoy from this model are; because, it is administered by the management of the company, it enables them to display objectivity, discretion and flexibility over CCP decisions and practices. The model relies on the positive relationship with the local elites, it enhances the company’s capacity to devise suitable corporate-political strategies and adequately respond to situations that might affect its business. Finally, it serves as effective short-term public relations and risk management

purposes. (Idemudia 2014) The disadvantages of this model are that it can lead to community dependency instead of community empowerment. This is said to be the reason for increased community demands on oil companies. There is also the tendency for incompatibility between CCP objectives and the priority needs of the community. This is because, local elites often tend to push their selfish interest as against the community interests. More so, CCP projects do not give the community people a sense of ownership so they are likely to be unsustainable. Another disadvantage is that this model is often regarded as a stimulant of intra and inter-community conflicts over CCP benefits.

# Corporate-Community Foundation Strategy

Due to the gravity of the disadvantages experienced from adopting the traditional model of CCP, there became a need to search for a more innovative strategy for CCP. Some companies decided to partner with NGOs or form charity foundations in partnership with the community. This was because the companies spent huge amounts of money on CCP projects but did not get commensurate appreciation from their host communities. Intra and inter community struggles over CCP benefits has hampered oil production activities and hurt company reputation (Idemudia, 2014). The foundation model is a separate legal entity but funded and influenced by the company. However, projects decisions are made and managed by the foundation or through the NGOs. However, the local communities are also expected to contribute funds, human and natural resources or capital assets like land for achievement of development plans and objectives (Loza, 2004,). Potential benefits which businesses stands to enjoy include increased access to critical resources and relevant local information, enhanced reputation, and organizational learning (Morris & Bartkus, 2015). There is the tendency for the cost of CCP projects to be

effectively managed by dissuading high community expectations since most of such corporate investment is long-termed. Community participation is central in this model hence there is the likelihood it will reflect core community needs, promote community empowerment, project sustainability and a close cooperation among the communities. Thereby reducing intra and inter- community conflicts (Getz & Oetzel, 2010). Lastly, it reduces the opportunity or incidence of corruption, mishandling and misappropriation of funds.

# Global Memorandum of Understanding (GMOU)

The global memorandum is a model that is geared towards addressing the development needs of the host communities. The company and the community enter a ‘stand-alone’ arrangement that is formalised by signing a Memorandum of Understanding or partnering agreement (Esteves & Barclay, 2011). In the Niger Delta, this model was initiated by Chevron following the aftermath of the 2003 Ijaw and the Itsekiri ethnic violent and destructive clashes in Delta State. This was as a result of the fact that previous models did not yield a stable operational environment for the company nor did it contribute to community development. Hence, the need for a new community engagement approaches in the Delta. (Hoben, Kovick, Plumb & Wright 2012,). The model was a direct alteration from traditional method of negotiations with host and non-host communities by bringing together similar ethnic groups within close geographic proximity to form a GMOU cluster in most Niger Delta states (Idemudia 2014). The model is usually operated under the sponsorship of a separate ‘Community Fund’ which is often used to address the social, environmental and economic needs of the host communities (Esteves & Barclay, 2011). According to Idemudia (2014), the advantages of the GMOU models include; companies are able to maintain control over memorandum’s decision making, plans and the

outcomes of the CCP projects. The disadvantages of this model unlike the corporate community foundation model, the GMOU model does not allow for effective community engagement. Hence, the model is still subject to the influence of the local elites and company staff.

# Social and Political Involvement

“The wider aim of CSR is to create higher and higher standards of living while preserving the profitability of the corporation or the integrity of the institution, for people both within and outside these entities (Hopkins, 2011). This reflects the idea that CSR discussion should keep an important position in a country’s socio-economic environment. CSR should serve as a main tool to identify and improve the relation between business and society. Elkington (1997) stated that in its narrowest term, the social dimension of CSR is the whole set of values, issues and processes that companies must address in order to minimize any harm resulting from their activities and to create economic and social values. The key features here is the focus on the longer-term impact of corporate practices; and the principle that organizations are answerable to a wide set of stakeholders, not simply shareholders (Nolan 2006). Dyllick and Hockerts (2002) define corporate sustainability as meeting the needs of both direct and indirect stakeholders, without compromising its ability to meet the needs of stakeholders in the future. The social dimension ensures that the organisation is accountable to internal and external stakeholders and that a company to address impacts of its business operations and the concerns of its principal stakeholders (Christensen, Peirce, Hartman, Hoffman, & Carrier, 2007). In literature, there is no real consensus as to the exact dimensions used for social and political dimension measures (Jackson, Boswell & Davis, 2011). Some other dimensions used stakeholder engagement, organizational integrity, and stakeholder activism (Painter-Morland, 2006). Social sustainability

means that organizations provide equitable opportunities, ensure the quality of life and provide democratic processes and accountable government structures (Gimenez et al., 2012).

# External CSR: Promoting Staff Welfare and Development

There is mounting evidence that companies increasingly recognize the importance of identifying and measuring their employee-focused CSR activities. Consequently, it has become an important research question how to identify, group and measure internal CSR activities which reflect company commitment to address employee concerns. Internal CSR practices refer to employee-oriented CSR activities which are directly related to the physical and psychological working environment of employees concerning their health and well-being, their training and participation in the organization, equal opportunities and work-life balance (Turker, 2009). Internal corporate social responsibility is mainly concerned with internal organizational activities of management toward the welfare of employees beyond the strategic and legal bounds of organization (Mehta et al., 2014). Internal corporate social responsibility has its own importance. The internal operations of organization toward employees are associated with internal corporate social responsibility (Bauman et al., 2007). The study of trucker (2009) recommended the internal corporate social responsibility as a psychological endowment for working environment. Laurinavičius and Romeris (2013) claim that corporate social responsibility (CSR) is a commitment of an organization to meet the needs and interests of their stakeholders (shareholders, suppliers, employees, customers, community and others). Employees, being considered as one of the most important internal resource, require special attention because of their key role. Internal corporate social responsibility has its own importance. According to the study of Trucker (2009) internal CSR is linked with physiological and psychological endowment

working environment. The companies with poor internal CSR practices have lower job satisfaction (Tamm et al., 2010). All the aspects of employees` wellbeing make a constituent part of internal dimension of CSR.

# Measurement of CSR Reporting

Within the growing body of literature oriented toward assessing the content, and sometimes the quality, of corporate social reporting, three assessment methodologies have taken the fore: surveys, content analysis, and index; each shedding light on different aspects of the practice and sometimes leading to divergent conclusions.

# i. survey (questionnaires and interviews)

This approach examines by investigating perceptions of financial analysts, investors or other user groups about firms’ practices through questionnaires or interviews. Several studies have used this method (Lee, 2012; Naser & Nuseibeh, 2003). Perhaps the most common example of using survey is the results of two surveys conducted by the Financial Analysts Federation (FAF)/the Association for Investment Management and Research (AIMR) which have been used as proxies for quantity and quality in a number of prior studies (Lang & Lundholm, 1996; Sengupta, 1998; Healy, Hutton & Palepu, 1999; Botosan & Plumlee, 2002).

This measure of reflects the evaluation (ratings) of a number of leading specialist financial analysts for companies’ aggregate (mandatory and voluntary ) within three categories: annual published and other required information, quarterly and other published but not required information and other aspects of such as investor and analyst relations. The final score of a particular company is calculated as a weighted average of the three categories’ ratings. In sum, this approach uses interviews or questionnaires to reflect analysts’ (or other user group)

perceptions about firms’ practice rather than the policies. It has the advantages that scores constructed are not labour intensive and can be obtained for a sizable sample of firms compared to other types of proxies such as the self-constructed index. However, advantages and disadvantages of using questionnaires and interviews as research instruments apply here (Fink, 1995; Gillham, 2000; Frazer & Lawley, 2000). Furthermore, the quality of design of the research instrument will affect the quality of the results obtained. Furthermore, the objectivity of the views of the investigated user group could be questioned, given that no one can know their incentives to report their ratings and kind of biases that might be included (Lang, 1999).

# Index

Historically, Cerf (1961) was the first researcher who conducted an empirical study using a index. He developed an index consisting of 31 items, each of which was scored on a scale of 1 to 4 on the basis of interviews with financial analysts. Cerf’s (1961) approach, with extensions and modifications, has been used widely in many other studies to examine the adequacy of corporate financial in different countries. Considering a given a list of items, the value of the index for a particular company is obtained by dividing the number of information items disclosed by that company by the total number of information items that might be disclosed.

Prior studies using the index vary in terms of the degree of the researcher involvement in constructing the index, the type of information and the number of items of information included in the index. There are differences in the measurement approach, the range of industries/countries covered by the index and other differences, which are subject to the research purpose(s), design, and context. For example, studies from developing countries tend to examine level of compliance with mandatory because of a relaxed enforcement policy compared to that

of developed countries (Ali et al., 2004). The degree of the researcher involvement in constructing a index varies from full involvement to no involvement. Full involvement means that the researcher controls the entire process of constructing a index from selecting the items of information to be included in the index, to scoring these items. No involvement means that the researcher depends on available indices from prior studies or professional organisations. A number of prior studies use available indices from professional organisations as measures of level (Patel, Balic & Bwakira, 2002; Richardson & Welker, 2001)

Two important and contentious issues are often debated in the literature on the construction of indices. The first issue is whether some items should be weighted more heavily than others. The second is whether the weights should be externally generated (for example, with the aid of a user group such as financial analysts and bank loan officers), or researcher generated. Both weighted and unweighted indices have been used in accounting research studies. Both approaches have shortcomings. The use of an unweighted index has been criticised on its fundamental assumption that all items are equally important, and the use of a weighted index has been criticised because it may introduce a bias towards a particular user-orientation. Notwithstanding the subjectivity in weighting, all items cannot be of equal importance.

Using an existing index has an advantage in that direct comparisons with previous research work can be made (Marston & Shrives, 1991). Different indices have been used in previous studies since there is no agreed theory on either the type or the number of items of information to be included in the index. The number of items of information included in indices in prior studies varies from a few items (Tai, Au-Yeung, Kwok & Lau, 1990) to a few hundreds of items of information (Spero, 1979). In addition the type of information selected can cover

mandatory (Ahmed & Nicholls, 1994) or voluntary (Depoers, 2000) or both (Naser & Nuseibeh, 2003)

Chow and Wong-Boren, (1987) have provided some proofs that there may be no significant difference between weighted and unweighted indexes. In addition, weights neither affect real economic consequences on the subjects whose opinions are pooled (Chow & Wong- Boren, 1987) nor do they reflect stable perceptions on similar information. The information items forming the basis of the index of are either voluntary or mandatory .

In conclusion, the use of indices in the literature demonstrates a wide variety of approaches indicating the flexibility of the method. While various proprietary indices exist, many researchers choose to construct their own indices to meet the needs of their own research. Self- constructed index studies generally employ small samples due to the labour-intensive data collection process. Giving that the type and number of items of information to be included in a self-constructed index is subject to judgment, another potential limitation of using a index to measure level of is that the results are only valid to the extent that the index used is appropriate (Hassan et al., 2009). In addition, the construction of a index in studies to date does not explicitly account for the inter-relationships between different items of information, i.e. it does not take into account the incremental information content of each new item of information added to the index.

# Content Analysis

Content analysis is a research technique for making replicable and valid inferences from data to their context (Krippendorff, 1980). Using the content analysis technique, the amount of information disclosed can be measured per category or per company by counting the data items,

i.e. the number of words, the number of sentences, and the number of pages (Marston & Shrives, 1991; Hackston & Milne, 1996). Accounting researchers have employed content analysis as a research method in a number of ways. The literature describes two broad approaches to content analysis: mechanistic and interpretative. Mechanistic approaches capture and describe a surrogate assumed to convey meaning and reporting intent (Campbell, 2000). Typically, these studies are ‘form oriented’, which means the focus is on volumetric or frequency capture and semiotic assumptions tend to be applied. Smith & Taffler (2000) contrasted this with ‘meaning orientation’ suggesting that ‘form orientated’ content analysis involves “routine counting of words or concrete references” whilst ‘meaning orientated’ analysis “focuses on the underlying themes in the texts under investigation.

In this regard, meaning orientation has a greater interpretative element than in the mechanistic assumptions of form orientation. Mechanistic studies (Adams, Coutts, & Harte, 1995; García-Meca & Martínez, 2005) provide information about volumes and/or frequencies, and help to draw associations between different variables that might impact on behaviour. Typical mechanistic data capture is by word counts (Campbell, 2003), sentence counts (Patten & Crampton, 2004; Perrini, 2005), (summed) page proportions (Unerman, 2000), frequency of (Ness & Mirza, 2009), and high/low ratings (Patten, 1991). In most cases, the semiotic assumption applies in that the volume of signifies the relative importance of those (Unerman, 2000). Conversely, interpretative analysis typically attempts to capture meaning by disaggregating narrative into its constituent parts and then describing the contents of each disaggregated gcomponent (Milne, Tregidga, & Walton, 2003; Raar, 2002). The aim of interpretative studies is to gain greater understanding of what is communicated and how (Aerts,

2005). They are, therefore, more concerned with the quality, richness or qualitative character of the narrative (Buhr & Reiter, 2006; Tregidga & Milne, 2006).

A number of prior studies employ content analysis (Hackston & Milne, 1996; Francis, Hanna & Philbrick, 1997; Beretta & Bozzolan, 2004; Linsley & Shrives, 2006). One of the major limitations of manual content analysis is that this method is a labor-intensive data collection process, which inevitably restricts the sample size employed by most studies (Beattie & Thomson, 2007).

# Firm Characteristics

The firm characteristics to be discussed in this study includes the firms size, the firm age, firm leverage , firm profitability and firm industry of operation.

# Firm Profitability

According to Gasparetto (2004) one of the roles of accounting is to produce information on the business performance of a firm which refers to the extent to which a firm is able to accomplish its stated goals and objectives. These stated goals and objectives can be in the area of turnover - which is the actual sales value of a firm, market share which refers to the firm’s total percentage of the total business transaction of the industry it belongs, profitability- which refers to the organization’s capacity to generate profit and innovation which involves changing or adjusting an existing product into a new product; amongst others (Osisioma, Nnewi & Paul, 2015). Corporate financial performance may be measured from the perspective of monetary values which involves the use of financial-accounting information, and/or from the perspective of non-monetary information, but the most popular measure by which corporate performance is measure in practice is the financial performance measures (Okafor & Oshodin, 2012).

Measurement of financial performance can be based on profitability, liquidity, solvency, financial efficiency and repayment capacity (Karagiorgos, 2010).

Financial Performance can simply be described as the firm’s ability to generate earnings by the efficient and effective utilization of available resources over a given period. It reflects the financial condition and achievement of a firm for a certain period of time (Haryono & Iskandar, 2015). Financial performance is a composite of the firm’s financial health and the process of measuring the results and achievement s of an organisation’s operations in monetary terms. Corporate financial performance according to Orlitzky *et al*. (2003) has been basically measured in three forms: the accounting measurement which expresses an idea of the organisation’s internal efficiency; market measurement which reveals the degree of shareholders’ satisfaction; and survey measurements which reflects a kind of subjective estimation of the organization’s financial performance. There are two main categories of corporate financial performance measures. The first category of measures is accounting-based measure while the second category is the market-based measure.

According to stakeholder theory, economic performance of a firm effects management’s decision to behave in a way that may be termed socially responsible. Therefore, when companies are not performing well, economic demand take precedence over social performance. An inverse relation between corporate performance and corporate social responsibility practices is in line with the orthodoxy associated with traditional economic thought that depicts this relation as a trade -off between the firms’ profitability and its corporate responsibility (Freedman, 1992). There are two different conceptions regarding a firm’s profitability and the tendency to disclose voluntary information. First, more profitable firms are more likely to disclose more while less

profitable firms tend to be more secretive. Profitable firms may be more inclined to disclose more information in order to screen themselves from less profitable firms. However, looking at the empirical findings in this regards appears to be mixed between those showing significant relationships between profitability and CSR reporting and those showing insignificant relationships.

Lungu (2011) examined the relationship between reporting companies’ characteristics and the importance assigned to social and environmental , using statistical correlations. The study conducted a content analysis on the extent of sustainability reports of the largest fifty (50) companies classified by Global Fortune in 2009. The result showed that there is a significant negative correlation between change in revenues and return on equity and social for the sampled companies.

Uwuigbe and Egbide (2012) investigated the relationship between firms’ corporate financial performance and the level of corporate social responsibility among selected firms in Nigeria. The study also looked at the relationship between firms’ financial leverage and the level of corporate social responsibility among selected firms. While the annual reports for the period 2008 was utilized and had a sample forty one (41) listed firms. The employed the multiple regression analysis to analysed the data and the result revealed that firm’s financial performance have a significant positive relationship with the level of corporate social responsibility among selected firms.

Makori and Jagongo (2013) established whether there is any significant relationship between environmental accounting and profitability of selected firms listed in India. The data for the study were collected from annual reports and accounts of fourteen (14) randomly selected

quoted companies in Bombay Stock Exchange in India. The study used multiple regression models to analysed data and the key findings of the study shows that there is significant negative relationship between environmental accounting and return on capital employed and earnings per share and a significant positive relationship between environmental accounting and net profit margin and dividend per share.

# Firm Size

The size of a company is the most commonly analyzed feature in the reviewed studies to explain the level of in general. According to Roberts *et al.* (2005), firm size plays an important role in determining the extent of information in annual reports. Ousama and Fatima (2010) explain the relationship between firm size and the extent of . Raffournier (1995), Camfferman and Cooke (2002), Watson, Shrives and Marston (2002), Bozzolan, Favotto and Ricceri (2003), Prencipe (2004), Garcia-Meca and Martinez (2005) Barako, Hancock and Izan (2006), Bronson, Carcello and Raghunandan (2006) and Macagnan (2007) tested the size hypothesis. Large companies have a greater number of contracts between managers and shareholders than small companies and, hence, a greater principal agent problem. A higher level of might reduce agency costs between managers and shareholders. Another motivation for increased in a large company is the existence of a more complete information system, which would allow lower costs of obtaining and publishing information compared to those incurred by a small company (Watson et al., 2002). It is also understood that a smaller company is more vulnerable to a loss in competitive advantage than a larger company.

# Firm Leverage

Leverage one of the important items in the capital structure of companies and it provides a medium for corporate financing as firms borrow money in order to obtain the capital they require for operating their businesses. Leverage can either be short-term or long-term. Short-term leverage represents funds needed to finance the daily operations of the firm, such as trade receivables, short-term loans and inventory financing. Given that firms with higher leverage levels incur more agency costs (potential wealth transfers from debt-holders to shareholders and managers), they seek to reduce these costs and information asymmetries by disclosing more information to satisfy the needs of creditors for information (Prencipe 2004).

Companies with higher level of financial leverage may find it more needful to engage in CSR reporting and tend to disclose the reports than companies with lower level of financial leverage. According to the agency theory, firms with a higher level of financial leverage tend to voluntarily engage in CSR reporting in order to satisfy creditors and remove the suspicious of wealth transfer to shareholders. However, the empirical findings on the relationship between leverage and CSR reporting have been mixed. Studies that have found a significant relationship includes that of Uwuigbe and Egbide (2012) which investigated the relationship between firms’ corporate financial performance and the level of corporate social responsibility among selected firms in Nigeria. The study also looked at the relationship between firms’ financial leverage and the level of corporate social responsibility among selected firms. While the annual reports for the period 2008 was utilized and had a sample forty one (41) listed firms. The employed the multiple regression analysis to analyze the data and the result revealed that firm’s leverage had a significant negative relationship with the level of corporate social responsibility among selected firms.

Similarly, Giannarakis (2013) aimed to increase understanding of the potential effects of corporate characteristics on the extent of corporate social responsibility . The study’s sample consisted of companies from the Fortune list for the year 2011 as they are more likely to disclose corporate social responsibility information. The environmental, social, and governance scores are introduced in order to determine the extent of corporate social responsibility . The results based on the multiple regression models indicated that the financial leverage is negatively related with corporate social responsibility . Farouk (2013) used financial and non-financial factors to examine their impact on Banks corporate social responsibility. Multiple regression techniques were adopted by the study and data were collected through the annual reports and accounts of the sampled companies for the period 2005 to 2011. The result indicated that firm leverage was positively and significantly determined corporate social responsibility .

# Firm Age

Shumway (2001) claims that the economically most meaningful measure of firm age is the number of years since listing. Measuring age is not always straightforward, especially in the presence of mergers. There are different perpectives on how firm age influences the growth process of firms. Young firms might, for example, have higher growth rates but also more erratic growth paths than older firms. Existing theories of how firm ageing processes influence growth paths give us no clear guidance. One the one hand, we may expect that young firms face a liability of newness (Stinchcombe, 1965). Translated to growth persistence, older firms may have more experience and foresight when it comes to their business environment, which lead to longer planning horizons, and can therefore be expected to have smoother growth paths with fewer bumps and surprises (that is – more positive autocorrelation in their growth rates).

Learning-by-doing models (Sorensen and Stuart, 2000; Chang et al., 2002) also suggest that older firms may benefit from their greater business experience, and therefore have a higher degree of growth persistence than younger firms. On the other hand, older firms might suffer from a liability of obsolescence‟ and also a liability of senescence‟ (Barron et al., 1994). This implies lower growth persistence for old firms, since they have problems adapting their strategies to changing business conditions as well as increasing inertia and organizational rigidities. Young firms might also seek to achieve Minimum Efficient Scale (MES) as they struggle to overcome their „liability of newness‟ and achieve economies of scale (Lotti et al., 2009). However, once they have survived the first few years and have settled into their new organizational routines, growth will lose its momentum.

On the contrary, a number of studies have also found an insignificant relationship between firm age and corporate social responsibility. For example, Bidari (2016) examined the extent of corporate social responsibility made by Nepalese banks in their annual reports based on GRI G4 guidelines. Also the study examined the relationships between the influencing factors (i.e. bank size, bank age, bank’s profitability and ownership structure) and the corporate social responsibility levels (i.e., economic, social, environmental and the overall corporate social responsibility ). The study selected a sample of eighty two (82) from the Nepal Stock Exchange for the year 2014 and employed a content analysis and multiple regression analysis tools to test the developed hypothesis. The study found that bank age was positively related to the extent of social and environmental , but it was an insignificant predictor to the extent of economic and the overall corporate social responsibility .

Al-Ajmi, (2015) examined firm corporate social responsibility practices in Kuwait by analysing 2012 annual reports of industrial and services firm listed in Kuwait stock exchange to find out whether the level of social responsibility is influenced by firm specific characteristics. The study revealed that the majority of the firms somehow disclosed social information and firm age is not significantly influenced corporate social responsibility in the sampled firms in Kuwait stock exchange.

Bani-Khalid (2017) examined how corporate characteristics could influence the amount of corporate social and environmental in the manufacturing sector in Jordan. The study developed a index to measure the amount of corporate social and environmental for three years (2010, 2011 and 2012) and used panel data regression to determine the relationship between amount and the key drivers of corporate social and environmental via random effect estimation. The result indicated that firm age is not significant to the practices of corporate social .

# Firm Industry of Operation

The relationship between industry type and corporate social responsibility financial statement has provided a mixed result in both the developed and undeveloped economies. A number of the studies have examined the relationship and have found the existence of a positive relationship such as Abdulhaq and Muhamed (2015) which examined the extent of corporate social responsibility and its determinants. The study employed content analysis of the annual reports and websites to measure the extent of corporate social responsibility in Saudi Companies. Furthermore, to identify factors influencing the extent of corporate social responsibility the study adopted multiple regression analysis and the results showed that the level of corporate social responsibility by listed companies on Saudi Stock Exchange was low with an average of 36 %, indicating that such is still not of a primary concern to these

companies. The findings suggest that the extent of corporate social responsibility is positively influenced by company type of industry.

Supporting the presence of positive relationship, Bandara (2016) focused on companies listed on Port Moresby Stock Exchange. In addition, the study covered data through secondary source which involved the sampled companies’ annual reports and accounts published during the three year period of 2011 – 2013. The study revealed that 60% of the total CRS items expected to disclose by PNG companies have not been disclosed. Further analysis shows that out of the only 30% are detailed and comprehensive with verifiable and quantifiable evidences whereas other are loose statements. The study further revealed that industry type significantly influenced corporate social responsibility .

Studies showing evidence of a negative relationship in contrast to those cited above, includes those of Dyduch and Krasodomska (2017) and the sample size was sixty (60) companies listed at Poland Stock Exchange for the year 2014. The employed content analyses and used tobit regression statically approach to analyzed the data. The result provided that industry type had negative and significant relationship with corporate social responsibility financial in Poland. Also in support of a negative relationship, Alkayed (2018) study employed a quantitative approach and a content analysis technique to gather corporate social responsibility extent and quality from the annual reports. The study had a sample from the annual reports of

118 Jordanian companies over the period of 2010-2015 and constructed corporate social responsibility index includes the of the following categories; environmental, human resources, product and consumers, and community involvement. The regression result of the study revealed that industry type had a negative significant impact with corporate social responsibility .

# Firm Life Cycle

The theory of life cycle takes the position that organizations are similar to other natural creatures and hence they are born and then they develop, grow into maturity and eventually die (Dechew & Dichev, 2005) and we add that death for firms can take different forms. It is possible for liquidation to occur and the company shuts down completely, there are also cases leading to merger/acquisition and corporate buy-outs. The organisational literature has for a long time identified that a firm can be seen as a dynamic entity evolving through unique developmental stages (Quinn & Cameron 1983; Miller & Friesen 1984; Mueller 1972) and it is this process of movement by a firm and the unique characteristics associated with these movements from one stage to another through its birth to its eventual death is known as the firm’s life cycle.

In the words of Miller et al. (1984) each life cycle stage has its own unique features, and that mounting complexity in the business environment results in each stage to showing certain unique responses that will be different from the responses in other stages. As such, each stage of the life cycle is a reflection of an array of a peculiar mix of firm attributes/characteristics. Furthermore, movements from one phase to another could arise because of the changes in both internal factors (i.e., strategy, structure etc) and other outside causes (i.e., environment). Stickney & Weil (2006) point out that like any living creature, the process of growth for organizations are largely characterized by the extent of control and flexibility that they are able to maintain over time as this will determine how formidable they can go into the future. In the growth stage, organizations tend to be quite flexible, with relatively less control. However as the organization ages, there is the presence of more controls and less aging flexibility. Finally, in the stage of decline the level of control will depend on additional factors.

The corporate and institutions lifecycle is divided into various steps according to economic and management theories (Stickney & Weil, 2006). Various phases have been suggested for the corporate lifecycle in literature. Researchers outline four stages for describing the corporate lifecycle as follow: Introduction/birth, Growth, Maturity and Decline (Stickney & Weil 2006; Stickney & Brown 1999). Growth has been thought to influence earnings management as a firm’s characteristics. Studies usually control for growth in income smoothing studies (Dou, Hope & Thomas, 2013; Tucker & Zarowin, 2006). Controlling for growth in their model on earnings management, Tucker and Zarowin (2006) observe that high growth firms make smooth earnings or income more dominantly. This is aimed at disseminating more information through smoothing given that growth would eventually lead to the need to raise equity from the capital market. Potential and existing investors need to be given as much information on the company’s prospect thereby resulting in earnings management by the agent to achieve certain earnings benchmark.

Douch, Mashruwala, Seethamraju and Zach (2005) tested for growth as a control variable and another factor that affects nondiscretionary accruals, proxy for earnings management. They included growth in the Jones (1991) model, the modified Jones model by Dechow et al. (1995) and Dechow, Kothari, and Watts (1998) model. They found that growth is strongly associated with non discretionary accruals. Dechow et al. (2012) controlled for growth in their model after which the results showed a decline in the extent to which discretionary accrual were detected. Kothari, Mizik and Roychowdhury (2012) found that managers have a greater inclination to engage in earnings management at the time of seasoned equity offerings. Firms’ life cycle is an important aspect and determinant of many corporate decisions (Lester, Parnell, Crandall &

Menefee, 2008). According to Abdullaha and Norman (2014), corporate organisations’ behaviour differs in different life-cycle stages, just as financial reporting behavior is also expected to vary with stages of organizational life-cycle. As such, each life cycle stage is a multifaceted construct that captures a unique combination of organizational characteristics. According to Dickinson (2011), life-cycle stages can be defined as distinct and identifiable phases that arise from changes in internal factors such as strategy choices, financial resources and managerial ability, and/or external factors such as competitive environment and macroeconomic factors. Black (1998) defines life-cycle stages as a surrogate for firms’ economic attributes. Chang (2015) defines a firm’s life cycle as a way that allows an ample number of firms in each of the five life cycle stages (Introduction, Growth, Mature, Shake-out, and Decline).

Chen, Yang, and Huang, (2010) indicate that a firm life-cycle reflects the result of dynamic accounting choice which resembles factors beyond earnings management motivations since it is hardly believed that all managers would share the same motivation and incentives at the same time during different life-cycle stages. Furthermore, transitions between different stages could arise due to changes in both internal factors (i.e., strategy, structure, and decision making methods) and external factors (i.e., environment). The chain of consecutive life cycle stages that a firm moves through from its birth to its eventual death is known as the firm’s life cycle. According to Miller and Friesen (1984), “Each firm’s life cycle stage would manifest integral complementarities among variables of environment “situation”, strategy, structure and decision making methods Organizational growth and increasing environmental complexity would cause

each stage to exhibit certain significant differences from all other stages along these four classes of variables”.

Researchers outline four stages for describing the corporate lifecycle as follow: Introduction/birth, Growth, Maturity and Decline (Stickney & Weil 2006; Stickney & Brown 1999).Stickney and Weil (2006) note that the firm is like every living creature, and the growth and aging of the entities are illustrated on the ground of controllability and flexibility such that in the stage of growth, organizations are very flexible, but usually uncontrollable. It changes as the organization is aging: more control in the face of less flexibility. Also, in the stage of decline the controllability will decrease. The corporate and institutions life cycle is divided into various steps according to economic and management theories (Stickney & Weil, 2006). Various-stage models have been suggested for the corporate lifecycle, in extant literature, corporations and enterprises pursue certain policies based on the economic stages in which they are. Dickinson (2011) indicates that operating performance is highest and most persistent for mature firms, due to improvements in operating efficiency during the mature stage. Firms in the growth stage have similar cash flow patterns with introduction firms except for cash inflows from operating activities (Dickinson, 2011). Dickinson (2011) documents that PPE (as a main component of total assets) and the corresponding depreciation expenses are maximized in this stage. Hence, the absolute value of the coefficient of PPE is also expected to be maximized in the growth stage. Firms in the mature stage (where the number of producers reaches a maximum) have operating efficiency through increased knowledge of operations, resulting in cash inflows from operating activities (Wernerfelt, 2005). Mature firms, however, incur cash outflows from investing and

financing activities due to obsolescence in investment previously made and distribution of excess funds, respectively (Jensen 1986).

# Firms’ Life Cycle Stages

In this section, we discuss the various life cycle stages as indentified in the literature, namely, introduction stage, growth stage, matures stage and decline stage.

# Introductory Stage

According to Liu (2006), the amount of assets that firms at this stage may have is likely going to be low, as such, the amounts of operating cash flow often required in terms of liquidity to finance and achieve growth may be much. The dividends payout in these companies is usually zero or very low and the returns coming from investment is often poor (Liu, 2006). Firms in this stage have a lot of cash outflows in the area of their investing and operating activities and inflows activities relating to financing and this is so because in the early stages, a huge proportion of investment is funded by external financing sources (Jensen, 1986).

The enormous amount of resources required for starting up especially in terms of product development and then to bring the product into the market as is the process for manufacturing firms tends to generate a surge in investment in operating assets and this also increases working capita l related accruals (Liu, 2006). Taking this side by side operating cash outflows tends to result in a situation where the consequence of change in cash sales becomes larger in this phase. Furthermore, in this stage, firms gradually accumulate fixed assets, but their carrying amount and depreciation expense are small relative to that for firms in other stages especially in the stages of growth and maturity. Accordingly, the magnitude of property, plant and equipment (PPE) will also have a propensity to be less in the introduction stage but as firms move into other stages, it

will be larger again because of the volume of depreciation expense (Dickinson 2011).

# Growth Stage

Growth has been thought to influence earnings management as firm attributes. Studies usually control for growth in income smoothing studies (Dou, Hope & Thomas, 2013; Tucker & Zarowin, 2006). Controlling for growth in their model on earnings management, Tucker and Zarowin (2006) observe that high growth firms smooth earnings or income more dominantly.

This is aimed at disseminating more information through smoothing given that growth would eventually lead to the need to raise equity from capital market. Potential and existing investors need to be given as much information on the company’s prospect thereby resulting in earnings smoothing by management to achieve certain earnings benchmark. Douch, Mashruwala, Seethamraju and Zach (2005) tested for growth as a control variable and another factor that affects nondiscretionary accruals, proxy for earnings management. They included growth in the Jones (1991) model, the modified Jones model by Dechow et al. (1995) and Dechow, Kothari, and Watts (1998) model. They found growth to be strongly associated with non discretionary accruals. Dechow et al. (2012) controlled for growth in their model after which the results showed a decline in the extent to which discretionary accrual were detected.

Kothari, Mizik and Roychowdhury (2012) found that managers have a greater inclination to engage in earnings management at the time of seasoned equity offerings. According to Dehdar, (2007), in the growth stage, it is assumed that the firm has developed some stability and proper understanding of the market environment and has a more stable internal structure. The amount of business is larger and there is activity in relation to growth in sales and also increase in income. Companies in this phase are also able to attain better liquidity levels as their resources

are carefully invested. At this level, the dividend payout ratio is on the average higher than that for firms in the introductory phase (Dehdar, 2007). Additionally, the return on investment for growth face has been identified to be high compared to the cost of financing. Although firms in the growth phase have similar pattern of cash flow with start-up firms, there is a difference in cash inflows from operating activities (Dickinson, 2011).

In responding to this intense competition, firms in the growth stage tend to trim down the size of their inventory by doing credit sales and this will thus result in an increase in accruals (Liu, 2006). Although growth firms encounter higher accruals from working capital, the growth in sales and the resulting increase in operating cash inflows could lessen the coefficient on change in cash sales in the growth stage than in other stages. Using cash inflows coming from operating activities and funded by external stakeholders, these growth firms further expand production capacity (e.g., PPE) to accommodate increasing customer demand. Dickinson (2011) documents that PPE (as a main component of total assets) and the corresponding depreciation expenses are maximized in this phase.

# Mature Stage

In the mature stage, corporations experience stable sale and cash needs are mostly met through the corporate internal sources. The volume of corporate assets owned by firms is also increased when we compare with the stage of growth (Dehdar, 2007). The existence of high liquidity for firms in this stage is because dependence on external financing is low, investment returns to be equal or higher than financing rate due decreased dependence on financing policy (Wernerfelt, 2005, Dehdar, 2007). The commercial risk faced by the firm in the maturity stage is usually lesser than what exists in previous stages. Given the increased stability, firms in this

stage tend to experience more operational cash flow (OCF) (Dehdar, 2007). Firms in the mature stage will also be able to operate more efficiently as a result of improved mastery of operations and the environment and this could lead to cash inflows through reduction in cost of operations (Wernerfelt, 2005). Mature firms, however, can have cash outflows because of the size of their investing and financing activities as a result of obsolescence in prior investment made and the sharing of surplus funds, respectively (Jensen 1986). Also, these mature firms focus a lot of attention on ensuring sustained market share and current profitability as against trying to make new investment. Their goal of their business strategy is to enhance their production processes (e.g., quality control) and reduce costs (Wernerfelt, 2005).

However, mature firms are associated with a lower level of accruals coming from working capital owing to the fact that they reduce investment in operating assets of short term nature while increasing the flow of operating cash inflows (Fairfield, Whisenant and Yohn, 2003; Liu 2006). As a result, when compared to introductory or growth stages, the effect of cash sales changes could be quite lesser. In addition, since mature firms also tend to cut down on investment in long-term operating assets and thus depreciation cost then begins to fall, the absolute value on PP&E may decline for firms in this stage when compared to other life cycle stages, especially, the growth stage.

# Decline Stage

In the decline stage, a huge number of firms begin to fade out of operations because of declining profitability. Consequently, these firms try to get back and maintain balance by either making new investments to rejuvenate the business or by cutting cost of operations for the company. Hence, the magnitudes of the coefficients on change in cash sales and PPE are

indeterminable from either cash flows or investment patterns in the shake-out stage. Growth opportunities are very slim at this stage. There tend to be more of a recessive period as profitability begins to fall while liquidity positions are threatened. Added to this is that firms in the stage face competitive situation in the midst of soaring financing costs becoming higher than investment returns (Dehdar, 2007). Indeed the riskiness of the business is amplified as firms move into this stage. At this stage, the income levels of the firms is in most cases at an abysmally low level and the fall in investment returns comes on back of the decline in investment opportunities and underlying reason for these changes is the weak demand (Dickinson, 2011).

To survive, firms at this stage have need to absorb these pressures and firms unable to do this will naturally be on their way out. Firms in the decline phase also experience cash outflows from operating activities and cash inflows from investing activities due to falling growth rates and liquidation of assets respectively (Wernerfelt, 2005).

Furthermore, the extents to which debts are either cleared or renegotiated will determine if firms will have positive or negative cash flows from financing activities. In spite of the low investment in working capital, operating cash outflows for companies in this phase make the effect of cash sales larger in the decline stage than in the other stages with operating cash inflows. In order to deal with negative operating cash flows and low profitability, firms here may begin to consider liquidation. (Dechow & Ge, 2006). Therefore, a minimal level of fixed assets and depreciation expense may be observed in this stage and the absolute value of the coefficient of PP&E in the decline stage is likely to be smaller than that in other stages (Liu, 2006; Dickinson, 2011).

# CSR and the Moderating role the Firm Life Cycle

**Growth Stage**

Growth-stage firms require both an ethical reputation and financial performance. Growing firms need to build trust with external stakeholders. In any case, a firm’s survival and operational continuity depend on the satisfaction of stakeholder groups (e.g., investors, internal employees, consumers, and governmental regulators). For instance, Lins et al. show that a trust between a firm and its stakeholders is built through investments in CSR. Thus, by undertaking CSR activities, a start-up firm can enhance its reputation, and this may in turn enhance its business efficiency. However, there will still be the opposite logic that a firm in the early stage has much more pressing activities than CSR. For instance, Al-Hadi et al. find that CSR reduces financial distress and this relation is more pronounced for firms in mature stage therein firms at the other stages may be more concerned about CSR investment. Nevertheless—and quite obviously—financial success is essential to firms that are starting a new business. As the organizational goal of publicly held firms is to maximize profits, CSR is viewed as an investment mechanism. By investing in CSR, firms can surpass their performance benchmark. In particular, Cochran and Wood find that firms’ young assets tend to have higher CSR ratings, and this implies that growing firms are expected to undertake CSR activities.:

# Mature Stage

Next, it is unclear whether mature-stage firms invest more or less in CSR, relative to firms in other stages. On one hand, mature-stage firms have sufficient internal resources to conduct CSR activities. As resource availability often dictates the costs of engaging in CSR, firms at this stage might engage in CSR more so than other firms in other life-cycle stages. On the other hand, mature-stage firms are less likely to increase financial performance

opportunistically, given that they already generate sufficient earnings. Moreover, these firms are now in the “right” direction in terms of their operating strategy, and this disincentivizes CSR engagement. Nevertheless, even for firms at this stage, maintaining ethical reputation is still on the table. Therefore, we make no ex ante predictions with respect to CSR activities among mature-stage firms: whether firms at this stage conduct more CSR activities than those at other stages remains an empirical question to be answered. Our second hypothesis is as follows: **Decline Stage**

Decline-stage firms tend to be engaged in more “extreme” adjustments—such as restructuring and mergers and acquisitions—rather than CSR activities, which are indirect means of survival. Additionally, when selling a firm in decline, company-to-company activities will be more vigorous than company-to-stakeholder activities. As firm-level slack resources are important determinants of investment in CSR activities [6], firms in decline are not as able to invest in CSR. Under agency theory, firms in earlier life-cycle stages have more growth opportunities, and those growth options diminish over time [27]. Thus, at some point in the decline stage, when growth-oriented resources have been exhausted, firms begin to acquire growing companies, or they are merged into another companies. Indeed, at this stage, conducting CSR activities is very much secondary to survival; we therefore expect the demand for CSR activities to be the lowest at this stage

# Empirical Review

Tifanny and Yu-Chuan (2021) study extends related research on corporate social responsibility (CSR) into the less-researched realm of Southeast Asia setting by investigating the role of life cycle stages on the relationship between CSR and firm value. This study uses a

sample of 1,247 firm-year observations of firms listed in Southeast Asia from 2012 to 2018. Descriptive, multiple regression and sensitivity analyses are presented in the study. The results provide evidence that although CSR and firm value, in general, have a positive relationship, the relationship is contingent on the stages of firm's life cycle. The effect of each CSR dimension on firm value differs across life cycle stages. The social dimension of CSR predicts higher firm value at the introduction and mature stages. The governance dimension affects firm value at the growth and shake-out/decline stages. Moreover, the environmental dimension affects firm value only at the later stage of the life cycle. The study concludes that policymakers, managers and other decision-makers may have a better understanding of firm's behavior in different life cycle stages.

Elsa, Annisaa and Rayna (2021) study aimed at proving that corporate social responsibility has a negative effect on financial distress and test corporate social responsibility against financial distress in different life cycle stages. Corporate social responsibility in this study measured using Global Reporting Iniative (GRI)-G4. Financial distress in this study measured using Altman’s Z-score model. This study classifies the life cycle of companies using cash flow pattern that includes phase start-up, growth, mature, and decline. The population in this study were all companies listed on the Indonesia Stock Exchange from 2014 - 2018. The sample of this study was 269 companies. Data was analyzed using logistic regression methods. The results showed that corporate social responsibility has a negative effect on financial distress. There is no evidence to support that at the start-up stage, CSR has a positive effect on financial distress. In the life cycle of the growth and mature stages, CSR has a negative and significant

effect on financial distress. There is no evidence to support that at the stage of decline, CSR has a negative effect on financial distress.

Woo and Seung (2018) examine whether a firm undertakes corporate social responsibility (CSR) activities as a function of its life-cycle stage. Drawing on prior CSR research that finds ethical concerns and opportunistic behavior to be two key motivations that underpin CSR activities, the authors hypothesize that firms in their growth stage are positively associated with CSR, while firms in stage of decline are less likely to invest in CSR. The empirical findings of the study derived by leveraging a sample of South Korean listed firms are consistent with these predictions. We further find that in the growth stage, group-affiliated firms are more engaged in CSR than are unaffiliated firms. Given that affiliated firms can share the resources of other group-member firms, this evidence supports the slack resource hypothesis. Overall, the results indicate that firms have different CSR strategies, depending on their life-cycle stage.

Ahmed, Bikram, Ali, Grantley and Mostafa (2017) examines the association between corporate social responsibility (CSR) performance and financial distress and additionally the moderating impact of firm life cycle stages on that association. Based on a sample of 651 publicly listed Australian firm-years’ data covering the 2007–2013 period, our regression results show that positive CSR activity significantly reduces financial distress of the firm. In addition, the negative association between positive CSR performance and financial distress is more pronounced for firms in mature life cycle stages. Our results are robust to alternative proxy measures of financial distress, CSR performance and life cycle stages.

Mostafa and Ahsan (2017) examines the association between the corporate life cycle and corporate social responsibility (CSR). Motivated by the resource-based theory, we hypothesize

and find supportive evidence that the resource base and competitive advantages allow mature firms to invest more in CSR-related activities than firms at other stages of the corporate life cycle. We further examine the role of financial resources in explaining the relation between the corporate life cycle and CSR. Our results show that size, profitability and slack resources moderate the association between the corporate life cycle and CSR. These findings are robust when subjected to a series of sensitivity tests.

Alhazmi (2017) explored whether corporate governance and firm-specific factors would influence corporate social responsibility practices in Saudi Arabia, and whether corporate social responsibility practices have effects on firms’ market value. The study’s data were collected using a content analysis method and measured corporate social responsibility by word count. The study analysed data using econometrics regression models based on a sample of unbalanced panel of five hundred and forty five (545) annual reports over a five-year period. The study found that firm age had a significant influence on corporate social responsibility practices.

Elshabasy (2017) assessed the impact of several corporate characteristics on environmental information of the listed firms in a developing country and selected the fifty (50) most active firms in the Egyptian stock exchange and the analysis is done using the financial statements from the book for the period 2007-2011, prior the revolution, along with the firms’ annual reports. The study’s final count for the firms was forty five (45), after excluding banks and insurance companies, for having different requirements and different corporate governance code. The tests for the research study used the multiple regression model applied using the SPSS and the findings found that there was a significant and negative relationship between firm age and environmental information .

Welbeck, et al. (2017) examined the type of environmental-related information firms disclose mostly in Ghana and used the Global Reporting Initiative (GRI) index as a benchmark, a content analysis of the corporate annual report of seventeen (17) firms listed on the Ghana Stock Exchange (GSE) was conducted over a 10-year period (2003 to 2012) to determine the total environmental scores of the sampled firms. Results of this study indicated that firm age had a significant relationship with firm’s environmental practices.

Barbosa (2017) analysed the extent of corporate-level social and provide some explanations for why potential differences exist between firms. The study sampled the reports of thirty (36) of the largest companies in and conducted an examination of the extent of the corporate social based on a scorecard and afterwards tested for statistical association between the final score each company received and the size of the company, position in the supply chain and the cultural environment of the firm’s headquarters country. The result pointed to a significant positive relationship between the extent of corporate-level social and the size of the company.

El-Moslemany and Etab (2017) established the relationship between corporate social responsibility and financial performance in the Egyptian banking sector. The study used only three (3) sampled banks because corporate social responsibility was a new concept that has not yet been fully established in the banking sector in Egypt. The study employed secondary data from the annual financial reports of the banks for the period from 2008 to 2011and carried out a content analysis of reports of the companies on various components of corporate social responsibility as reported in their annual financial reports. The results indicated an insignificant relationship between the independent variables (corporate social responsibility toward

environment, community, customer, and employee) and the dependent variables corporate financial performance as measured by (ROA, ROE, NPM, and EPS). The results of the study proved the absence of a significant relationship between the dependent and the independent variables as a whole.

In Saudi Arabia, the effect of corporate governance and firm-specific factors were examined by Alhazmi (2017) and the study related these variables on the level of corporate social responsibility practices. Furthermore, the study tested whether the relationship reduces or increases firms’ market value. The study’s data were collected using a content analysis method and measured corporate social responsibility by word count. The study analysed data using econometrics regression models based on a sample of unbalanced panel of five hundred and forty five (545) annual reports over a five-year period. The study found that firm size had a significant influence on corporate social responsibility practices.

Bani-Khalid, Kouhy, and Hassan (2017) examined how corporate characteristics could influence the amount of corporate social and environmental in the manufacturing sector in Jordan. The study developed a index to measure the amount of corporate social and environmental for three years (2010, 2011 and 2012) and used panel data regression to determine the relationship between amount and the key drivers of corporate social and environmental via random effect estimation. The result indicated that firm size is significantly associated with the practices of corporate social and environmental . In Nigeria, Soyinka, Sunday, and Adedeji (2017) analysed the determinants of corporate social responsibility using data collected from secondary source through the annual report and account of quoted banks listed at the stock exchange market in Nigeria. The study used descriptive, correlation and

regression approach to analyse the data and the result indicated that the relationship between firm size and corporate social responsibility was positive.

The study by Habbash (2016) in Saudi Arabia attempted to discover the corporate social responsibility practices and the potential influence of corporate governance, ownership structure, and corporate characteristics. This study extends the extant literature by investigating the drivers of corporate social responsibility in a country that lacks research in this area. This study examined two hundred and sixty seven (267) annual reports of Saudi non-financial-listed firms during 2007-2011 and used manual content and multiple regression analyses and a checklist of seventeen (17) corporate social responsibility items based on ISO 26000.The result indicated that firm size positively determined corporate social responsibility .

Tan, Benni, and Liani (2016) examined the effect of firm size, media exposure and industry sensitivity to corporate social responsibility and its impact on investor reaction. The population of the study comprised the companies listed on Indonesian stock exchange and the sample was taken by purposive sampling method, and samples of fifty three (53) companies were obtained. The study analysed data using partial least squares path modeling and the result revealed that firm size had a significant effect on corporate social responsibility .

Bidari (2016) examined the extent of corporate social responsibility made by Nepalese banks in their annual reports based on GRI G4 guidelines. Also the study examined the relationships between the influencing factors (i.e. bank size, bank age, and bank profitability and ownership structure) and the corporate social responsibility levels (i.e., economic, social, environmental and the overall corporate social responsibility ). The study selected a sample of eighty two (82) from the Nepal Stock Exchange for the year 2014 and employed a content

analysis and multiple regression analysis tools to test the developed hypothesis. The study found that bank size was positively related to the extent of social and environmental .

Nawaiseh (2015) examined the impact of company size and financial performance on corporate social responsibility , from the employees’ and environmental dimensions perspective with reference to the frequency and quality of these dimensions among Jordanian industrial public share holding companies. The study analyses was based on contents disclosed in their annual reports. Corporate social responsibility checklist for measuring the extent of corporate social responsibility in annual reports of these companies was used. The regression a result indicated that firm size had a positive and significant impact on corporate social responsibility . The study however did not look into quantitative but focused only on qualitative information. There is the need for coverage to cover both quantitative and qualitative aspects of .

Abdulhaq and Muhamed (2015) measured the extent of corporate social responsibility and its determinants by listed companies on Saudi Stock Exchange. The study employs content analysis of the annual reports and websites to measure the extent of corporate social responsibility in Saudi Companies. Furthermore, to identify factors influencing the extent of corporate social responsibility , the study adopted multiple regression analysis and the results showed that the level of corporate social responsibility by listed companies on Saudi Stock Exchange was low with an average of 36 %, indicating that such is still not of a primary concern to these companies. The findings suggested that the extent of corporate social responsibility was influenced by corporate size. On a general note, when studies look at the corporate size variables, the custom is always to look at it using only total assets as the measure as is used in this study. There is a need to also use other measures for firm size.

Musah (2015) presented a framework based on legitimacy theory that explained the determinants of corporate social responsibility in terms of both quantity and quality of corporate social responsibility of listed firms on the Ghana stock exchange. The study sampled thirty three

(33) firms listed on the Ghana stock exchange over a six year period and adapted a index by Hackstone & Milne (1996) and used content analysis to extract social information from the firm’s annual report. The result of the panel regression showed that, quantity of corporate social responsibility and to lesser extent quality of corporate social responsibility is determined by the corporate size.

Unlike prior studies, El-Halaby and Hussainey (2015) adopts a cross country approach in examining the determinants of corporate social responsibility in Islamic banks around the world. The study employed content-analyze on the corporate social responsibility for a sample of one hundred and thirty eight (138) Islamic banks across twenty five (25) countries to identify the levels of corporate social responsibility . In addition, the study used regression analysis to identify the factors affecting corporate social responsibility in Islamic banks and the result showed a very low level for corporate social responsibility (26%). The result also indicated a positive association between corporate social responsibility levels and firm size. Though the estimation and findings did not show particularly the role of the unique operational and regulatory environment in each country on corporate social responsibility reporting.

Habbash (2016) aimed to discover the corporate social responsibility practices and the potential influence of corporate governance, ownership structure, and corporate characteristics, in an emerging Arab country, Saudi Arabia. This study extends the extant literature by

investigating the drivers of corporate social responsibility in a country that lacks research in this

area. This study examined two hundred and sixty seven (267) annual reports of Saudi non- financial-listed firms during 2007-2011 and used manual content and multiple regression analyses and a checklist of seventeen (17) corporate social responsibility items based on ISO 26000.The result indicated that firm age is positive determinants of corporate social responsibility .

On the contrary, a number of studies have also found an insignificant relationship between firm age and corporate social responsibility. For example, Bidari (2016) examined the extent of corporate social responsibility made by Nepalese banks in their annual reports based on GRI G4 guidelines. Also the study examined the relationships between the influencing factors (i.e. bank size, bank age, bank’s profitability and ownership structure) and the corporate social responsibility levels (i.e., economic, social, environmental and the overall corporate social responsibility ). The study selected a sample of eighty two (82) from the Nepal Stock Exchange for the year 2014 and employed a content analysis and multiple regression analysis tools to test the developed hypothesis. The study found that bank age was positively related to the extent of social and environmental , but it was an insignificant predictor to the extent of economic and the overall corporate social responsibility .

Al-Ajmi, et al. (2015) examined firm corporate social responsibility practices in Kuwait by analysing 2012 annual reports of industrial and services firm listed in Kuwait stock exchange to find out whether the level of social responsibility is influenced by firm specific characteristics. The study revealed that the majority of the firms somehow disclosed social information and firm age is not significantly influenced corporate social responsibility in the sampled firms in Kuwait stock exchange.

Using a much larger sample of companies, Kansa, Joshi, and Batra (2014) examined the relationship between a number of financial and non-financial corporate characteristics and the level of social responsibility based on top 100 companies in the Bombay Stock Exchange (BSE) 500 index and relating their levels to financial and non-financial determinants. The study used content analysis method to measure the corporate social responsibility of the sample companies and the analysis indicated that corporate size is positively determined the level of corporate social of the companies in India. The study of Akbaş (2014) focused exclusively on non- financial companies though no justification was given for the selection. The author investigated the relationship between company characteristics and the extent of the environmental of Turkish companies. The sample of the study consisted of sixty two (62) non-financial firms listed on the BIST-100 index at the end of 2011. The study used content analysis and analysed data with regression statistical approach. The result indicated that company size was positively related to the extent of social .

In the study of Sulaiman, Abdullah, and Fatima (2014), they examined the relationship between shares ownership distribution, profitability, firm size and leverage with the quality of social and environmental in annual reports in 2009, two years after Malaysia made corporate social responsibility mandatory for all listed companies. The study employed a content analysis of the annual report of one hundred and sixty four (164) companies in the environmentally sensitive industries. The findings revealed a significant positive association between firm size and quality of environmental reporting. The study focus on environmentally sensitive companies may not have been necessary since all most all companies have social obligations to the society.

However, a number of studies did not find any significant relationship between the firm size and the corporate social responsibility . For example, Hassan (2009) investigated the relationship between corporate social responsibility and firm size. The study covered forty (40) sample companies from UAE. The study used multiple regression analysis method to analyzed data in the study and the result indicated that corporate size had no significant relationship with corporate social responsibility level. In same vein, Lungu, Caraiani and Dascalu. (2011) examined the relationship between reporting companies’ characteristics and the importance assigned to social and environmental , using statistical correlations. The study conducted a content analysis on the extent of sustainability reports of the largest fifty (50) companies classified by Global Fortune in 2009. The results showed that size characteristics measured by assets and revenues cannot be correlated to the extent of corporate social responsibility reports published by companies.

The absence of a significant relationship is also observed in the study of Ebiringa, et al. (2013) which examined the effect of firm size on the extent of corporate social responsibility by Oil and Gas firms in Nigeria. The covered a sample of twenty quoted companies for 2011 and used ordinary least squares regression technique to analysed the data. The findings showed that an insignificant negative correlation existed between corporate social responsibility and firm size.

Same goes for Alkababji (2014) which examined the relationship between corporate social responsibility and the variables which may determine. The study developed and utilised a index to measure the extent of made by companies in corporate annual reports also by using the guidelines (Global Reporting Initiative (GRI-G3). The study reports significant differences in

levels of social and environmental , as measured by the mean values of the social and environmental index in Palestine. In addition, this study indicates that the level of corporate social responsibility is fairly low in Palestine corporations. Finally, the finding showed that there is correlation between corporate social responsibility level and the size of the firm.

In addition, Nawaiseh, Boa, and El-shohnah (2015) established whether there is an influence of firm size and profitability on corporate social responsibility towards employees’ dimension in the Jordanian banks. The study’s sample size was limited to thirteen (13) public shareholding commercial banking companies listed at Amman Stock exchange and employed content analysis. The result indicated that firm size had no significant influence on corporate social responsibility .

Naser and Hassan (2013) wmeasured the extent of corporate social responsibility and it’s determinants by non-financial companies listed on Abu Dhabi Securities Exchange. The study employed content analysis of the annual reports to measure the extent of corporate social responsibility in Abu Dhabi Companies. In addition, the study adopted multiple regression analysis to identify factors influencing the extent of corporate social responsibility . The findings revealed that the extent of corporate social responsibility is positively related to corporate size.

Bayoud, Kavanagh, and Slaughter (2012) explored whether company age, industry type and company size has a potential influence on levels of corporate social responsibility in the annual reports of Libyan companies. The study employed quantitative and qualitative methods to collect data to determine the level of corporate social responsibility in Libyan firms.The study tested hypotheses using regression analysis on a sample of forty (40) annual reports from Libyan companies’ from 2007 to 2009. In addition, according to the study, thirty one (31) of the

financial managers and information managers expressed their perceptions about the determinants of corporate social responsibility in Libya. The study’s quantitative findings revealed that there was a positive relationship between company age and the level of corporate social responsibility

.Akbaş (2014) investigated the relationship between company characteristics and the extent of the environmental of Turkish companies. The sample of the study consisted of sixty two (62) non-financial firms listed on the BIST-100 index at the end of 2011. For the study to measure the extent of environmental , the annual reports of sampled firms for the year of 2011 were analyzed through content analysis. The study used regression method to analyze the data and the result indicated that company age was significantly related to the extent of environmental .

Bani-Khalid, et al. (2017) examined how corporate characteristics could influence the amount of corporate social and environmental in the manufacturing sector in Jordan. The study developed a index to measure the amount of corporate social and environmental for three years (2010, 2011 and 2012) and used panel data regression to determine the relationship between amount and the key drivers of corporate social and environmental via random effect estimation. The result indicated that firm age is not significant to the practices of corporate social .

Companies with higher level of financial leverage may find it more needful to engage in CSR reporting and tend to disclose the reports than companies with lower level of financial leverage. According to the agency theory, firms with a higher level of financial leverage tend to voluntarily engage in CSR reporting in order to satisfy creditors and remove the suspicious of wealth transfer to shareholders. However, the empirical findings on the relationship between leverage and CSR reporting have been mixed. Studies that have found a significant relationship includes that of Uwuigbe and Egbide (2012) which investigated the relationship between firms’

corporate financial performance and the level of corporate social responsibility among selected firms in Nigeria. The study also looked at the relationship between firms’ financial leverage and the level of corporate social responsibility among selected firms. While the annual reports for the period 2008 was utilized and had a sample forty one (41) listed firms. The employed the multiple regression analysis to analyze the data and the result revealed that firm’s leverage had a significant negative relationship with the level of corporate social responsibility among selected firms.

Similarly, Giannarakis (2013) aimed to increase understanding of the potential effects of corporate characteristics on the extent of corporate social responsibility . The study’s sample consisted of companies from the Fortune list for the year 2011 as they are more likely to disclose corporate social responsibility information. The environmental, social, and governance scores are introduced in order to determine the extent of corporate social responsibility . The results based on the multiple regression models indicated that the financial leverage is negatively related with corporate social responsibility .

Farouk (2013) used financial and non-financial factors to examine their impact on Banks corporate social responsibility. Multiple regression techniques were adopted by the study and data were collected through the annual reports and accounts of the sampled companies for the period 2005 to 2011. The result indicated that firm leverage was positively and significantly determined corporate social responsibility .

Sulaiman, et al. (2014) examined the relationship between share ownership distributions, profitability, firm size and leverage with the quality of corporate social and environmental in annual reports in 2009, two years after Malaysia made corporate social responsibility mandatory

for all listed companies. The study employed a content analysis of the annual report of one hundred and sixty four (164) companies in the environmentally sensitive industries (ESI) and measure quality using a self-developed index adapted from prior studies. The findings revealed a significant positive association between firm leverage and quality of environmental reporting.

Akbaş (2014) investigated the relationship between company characteristics and the extent of the corporate social and environmental of Turkish companies. The sample of the study consisted of sixty two (62) non-financial firms listed on the BIST-100 index at the end of 2011. For the study to measure the extent of corporate social and environmental , the annual reports of sampled firms for the year of 2011 were analysed through content analysis. The study used regression method to analysed the data and the result indicated that company leverage was significantly related to the extent of environmental .

Studies that have found an insignificant relationship includes those of Al-Ajmi, et al. (2015) which examined firm corporate social responsibility practices in Kuwait by analyzing 2012 annual reports of industrial and services firm listed in Kuwait stock exchange to find out whether the level of social responsibility is influenced by firm specific characteristics. The study revealed that the majority of the firms somehow disclosed social information and firm leverage is not significantly influenced corporate social responsibility in the sampled firms in Kuwait stock exchange Dibia and Onwuchekwa (2015) analysed of the determinants of environmental using oil and gas companies in Nigeria and used cross-sectional research design. The study covered a sample of fifteen (15) companies drawn from the oil and gas sectors of the Nigerian stock exchange for 2008-2013 financial years through secondary data sourced from the annual reports of the sampled companies while the Binary regression technique was used as the data analysis

method. The finding of the study showed that there is no significant relationship between financial leverage and corporate social responsibility .

Ohidoa, et al. (2016) investigated the determinants of corporate social and environmental in Nigeria. The study obtained historical data from the financial statements and account of firms in the manufacturing and financial sectors listed in the Nigeria Stock Exchange. The study employed the Binary logistic panel data regression and result revealed that financial has no significant relationship with environmental .

Hu, et al. (2016) examined the link between different types of shareholders and corporate social responsibility in the context of China. The study’s sample comprised of one thousand, eight hundred and seventy two (1872) listed Chinese firms with shares traded at the end of 2010. To identify firms that disclosed corporate social responsibility information, the study used the 2011 White Paper on Chinese firms’ corporate social responsibility published by the research centre for corporate social responsibility Chinese academy of social sciences (2011).The used descriptive and regression analysis to analyze data and result revealed that firm leverage had a negative and insignificant relationship with corporate social responsibility . Bruns (2017) examined the determinants of corporate social responsibility from the Netherlands perspective and used a sample of sixty eight (68) Dutch listed firms. The study employed Ordinary Least Squares (OLS) regression analysis to test determinants and result of the study indicated that firm leverage is not significantly determined corporate social responsibility .

Elshabasy (2017) assessed the impact of several corporate characteristics on environmental information of the listed firms in a developing country and selected the fifty (50) most active firms in the Egyptian stock exchange and the analysis is done using the financial

statements from the book for the period 2007-2011, prior the revolution, along with the firms’ annual reports. The study’s final count for the firms was forty five (45), after excluding banks and insurance companies, for having different requirements and different corporate governance code. The tests for the research study used the multiple regression model applied using the SPSS and the findings found that there was insignificant relationship between firm financial leverage and environmental information . Mohammed (2018) a study in Nigeria used content and regression analysis to examined the determinants of corporate social and environmental in listed oil and gas companies for the period six (6) years pre- and post of the Nigerian code. The result of the panel regression analysis indicated that the relationship between the corporate attribute of firm leverage was insignificant in determining the level corporate social and environmental in listed oil and gas companies in Nigeria. Mia and Al- Mamum (2011) examined the extent of corporate social responsibility by forty eight (48) Australian companies during period between 2006 and 2008. The study used correlation and regression statistical technique to analyzed data and the result indicated that corporate social responsibility had no significant associated with leverage.

Lungu (2011) examined the relationship between reporting companies’ characteristics and the importance assigned to social and environmental , using statistical correlations. The study conducted a content analysis on the extent of sustainability reports of the largest fifty (50) companies classified by Global Fortune in 2009. The result showed that there is a significant negative correlation between change in revenues and return on equity and social for the sampled companies.

Uwuigbe and Egbide (2012) investigated the relationship between firms’ corporate financial performance and the level of corporate social responsibility among selected firms in Nigeria. The study also looked at the relationship between firms’ financial leverage and the level of corporate social responsibility among selected firms. While the annual reports for the period 2008 was utilized and had a sample forty one (41) listed firms. The employed the multiple regression analysis to analysed the data and the result revealed that firm’s financial performance have a significant positive relationship with the level of corporate social responsibility among selected firms.

Makori and Jagongo (2013) established whether there is any significant relationship between environmental accounting and profitability of selected firms listed in India. The data for the study were collected from annual reports and accounts of fourteen (14) randomly selected quoted companies in Bombay Stock Exchange in India. The study used multiple regression models to analysed data and the key findings of the study shows that there is significant negative relationship between environmental accounting and return on capital employed and earnings per share and a significant positive relationship between environmental accounting and net profit margin and dividend per share.

Naser and Hassan (2013) measured the extent of corporate social responsibility and its determinants by non-financial companies listed on Abu Dhabi Securities Exchange. The study employed content analysis of the annual reports to measure the extent of corporate social responsibility in Abu Dhabi Companies. In addition, the study adopted multiple regression analysis to identify factors influencing the extent of corporate social responsibility . The findings revealed that the level of corporate social responsibility by companies listed on Abu Dhabi

Securities Exchange is low with an average of 34 %, indicating that such is still not of a primary concern to these companies. The results also suggested that the extent of corporate social responsibility is influenced by corporate profitability.

Ebiringa, (2013) examined the effect of profitability on the extent of corporate social responsibility by Oil and Gas firms in Nigeria. The covered a sample of twenty quoted companies for 2011 and used ordinary least squares regression technique to analysed the data. The findings showed that profitability is significantly positively related to corporate social responsibility of the companies in Nigeria.

Giannarakis (2013) aimed to increase understanding of the potential effects of corporate characteristics on the extent of corporate social responsibility . The study’s sample consisted of companies from the Fortune list for the year 2011 as they are more likely to disclose corporate social responsibility information. The environmental, social, and governance scores were introduced in order to determine the extent of corporate social responsibility . The results based on the multiple regression models indicated a positive relationship of corporate social responsibility to the return on sales, the return on equity and assets. This implied that increase in firm profitability for the period will lead to increase in corporate social responsibility .

Musah (2015) presented a framework based on legitimacy theory that explained the determinants of corporate social responsibility in terms of both quantity and quality of corporate social responsibility of listed firms on the Ghana stock exchange. The study sampled thirty three

(33) firms listed on the Ghana stock exchange over a six year period and adapted a index by Hackstone & Milne (1996) and used content analysis to extract social information from the firm’s annual report. The result of the panel regression showed that profitability was significantly

related to the quality of corporate social responsibility but not the quantity of corporate social responsibility .

Al-Ajmi, et al. (2015) examined firm corporate social responsibility practices in Kuwait by analyzing 2012 annual reports of industrial and services firm listed in Kuwait stock exchange to find out whether the level of social responsibility is influenced by firm specific characteristics. The study revealed that the majority of the firms somehow disclosed social information and firm profitability is significantly influenced corporate social responsibility in the sampled firms in Kuwait stock exchange

Giannarakis, Konteos, Zafeiriou, and Partalidou (2016) investigated whether corporate social responsibility affects the financial performance of the United States (US) companies. In particular, the study investigated the impact of corporate social responsibility on financial performance in terms of involvement in socially responsible initiatives instead of outcome and employed fixed effects regression to estimate the relationship between the extent of corporate social and financial performance using the data of listed companies on the Standard & Poor’s 500 during the period 2009-2013. The results of the study suggested that the involvement in socially responsible initiatives has a significant and positive effect on financial performance.

Ompusunggu (2016) analysed the effect of profitability on the of corporate social responsibility Indonesia. The study proxied ratio of profitability by the ROA, ROE and net profit margin and the study was conducted by examining the effect of profitability as the independent variable on the of CSR as the dependent variable. The sample of the study was the annual report of mining company listed on the Indonesian Stock Exchange in the period 2010- 2012. The samples were selected using purposive sampling method and acquired sixty three (63)

mining companies that have met the criteria of the sample. The study analysed data using multiple regression methods and the results of this study indicated that there profitability had a significant effects on the of CSR.

In contrast, a number of studies have found insignificant relationship between profitability and CSR reporting. For example, Sulaiman, et al. (2014) examined the relationship between share ownership distributions, profitability, firm size and leverage with the quality of environmental in annual reports in 2009, two years after Malaysia made corporate social responsibility mandatory for all listed companies. The study employed a content analysis of the annual report of one hundred and sixty four (164) companies in the environmentally sensitive industries (ESI) and measure quality using a self-developed index adapted from prior studies. The findings revealed that firm profitability had no significant relationship with quality of environmental reporting.

Burgwal and Vieira (2014) identified variables that impact significantly the level of environmental practices provided by Dutch listed firms. A content analysis scorecard was used by the study to test the mentioned level and environmental information for 2008was collected from a sample of twenty eight (28) Dutch listed companies, which was ones represent 90% of the total market capitalisation on the Dutch stock exchange, and the selected variables that could affect the level of environmental are firm size, industry membership and firm profitability. The result provided that firm profitability is not significantly and positively associated with the level of environmental .

Echave and Bhati (2010) examined the corporate social practices of Spanish firms. Annual reports of 41 Spanish firms for the year 2007 were analysed by the study to determine

the level of corporate social , industry differences in corporate social and the effect of financial performance on the quality of . The result showed that Spanish firms disclose most information on governance followed by products and services. Differences in made by various industry groups were observed suggesting that each industry group has certain preferences in disclosing information to their stakeholders. However, the study found no significant relationship between financial performance and corporate social for Spanish companies.

Dibia and Onwuchekwa (2015) analysed of the determinants of environmental using oil and gas companies in Nigeria and used cross-sectional research design. The study covered a sample of fifteen (15) companies drawn from the oil and gas sectors of the Nigerian stock exchange for 2008-2013 financial years through secondary data sourced from the annual reports of the sampled companies while the Binary regression technique was used as the data analysis method. The finding of the study showed that there is no significant relationship between company profitability and corporate social responsibility .

Nawaiseh, Boa, and El-shohnah (2015) established whether there is an influence of firm size and profitability on corporate social responsibility towards employees’ dimension in the Jordanian banks. The study’s sample size was limited to thirteen (13) public shareholding commercial banking companies listed at Amman Stock exchange and employed content analysis. The result indicated a mixed result between firm profitability and corporate social responsibility . Habbash (2016) aimed to discover the corporate social responsibility practices and the potential influence of corporate governance, ownership structure, and corporate characteristics, in an emerging Arab country, Saudi Arabia. This study extends the extant literature by investigating the drivers of corporate social responsibility in a country that lacks research in this

area. This study examined two hundred and sixty seven (267) annual reports of Saudi non- financial-listed firms during 2007-2011 and used manual content and multiple regression analyses and a checklist of seventeen (17) corporate social responsibility items based on ISO 26000.The result indicated that firm profitability is not among determinants of corporate social responsibility .

Umoren, Isiavwe-Ogbari and Morenike (2016) investigated the corporate social responsibility practices of Nigerian quoted companies and their determinants. The study developed a checklist of twenty (20) attributes to capture the social and environmental from the annual reports of forty five (45) companies from eight (8) sectors quoted on the Nigerian Stock Exchange over a two-year period (2013 to 2014). The study’s data were analysed using descriptive statistics, correlation and regression and findings revealed that was corporate social responsibility practices were not influenced by firm profitability.

The relationship between industry type and corporate social responsibility financial statement has provided a mixed result in both the developed and undeveloped economies. A number of the studies have examined the relationship and have found the existence of a positive relationship such as Abdulhaq and Muhamed (2015) which examined the extent of corporate social responsibility and its determinants. The study employed content analysis of the annual reports and websites to measure the extent of corporate social responsibility in Saudi Companies. Furthermore, to identify factors influencing the extent of corporate social responsibility the study adopted multiple regression analysis and the results showed that the level of corporate social responsibility by listed companies on Saudi Stock Exchange was low with an average of 36 %, indicating that such is still not of a primary concern to these

companies. The findings suggest that the extent of corporate social responsibility is positively influenced by company type of industry.

Supporting the presence of positive relationship, Bandara (2016) focused on companies listed on Port Moresby Stock Exchange. In addition, the study covered data through secondary source which involved the sampled companies’ annual reports and accounts published during the three year period of 2011 – 2013. The study revealed that 60% of the total CRS items expected to disclose by PNG companies have not been disclosed. Further analysis shows that out of the only 30% are detailed and comprehensive with verifiable and quantifiable evidences whereas other are loose statements. The study further revealed that industry type significantly influenced corporate social responsibility .

Studies showing evidence of a negative relationship in contrast to those cited above, includes those of Dyduch and Krasodomska (2017) and the sample size was sixty (60) companies listed at Poland Stock Exchange for the year 2014. The employed content analyses and used tobit regression statically approach to analyzed the data. The result provided that industry type had negative and significant relationship with corporate social responsibility financial in Poland. Also in support of a negative relationship, Alkayed (2018) study employed a quantitative approach and a content analysis technique to gather corporate social responsibility extent and quality from the annual reports. The study had a sample from the annual reports of

118 Jordanian companies over the period of 2010-2015 and constructed corporate social responsibility index includes the of the following categories; environmental, human resources, product and consumers, and community involvement. The regression result of the study revealed that industry type had a negative significant impact with corporate social responsibility .

# The Mediating Role of Firm Life cycle

We also argue that the association between CSR and financial distress is moderated by the firms’ life cycle stage. Given that managements’ access to resources and their strategy are likely to evolve across different life cycle stages, we conjecture that the relation between financial distress and CSR performance to similarly change across life cycle stages. The reason for this is that any association between financial distress and CSR performance is dynamic in nature contingent upon variation in economic fundamentals (e.g. cash flows, retained earnings, asset turnover and solvency-related risks) and opportunities available to the firm across its different life cycle stages. Thus, we assess that the relation between financial distress and CSR performance evolves conditional upon firm life cycle stages

Mature firms are concerned with the reputational consequences of their activities and how they interact with key stakeholders, including regulatory authorities and hence these firms are likely to engage in positive CSR activities more extensively as compared to younger or decline stage firms (Hasan and Habib, 2017). In fact, in the early and decline phases of firms’ life cycle, CSR activities and , and indirect costs including reputational effects and financial reporting effects, are likely to be less important than access to badly needed capital for survival, growth, innovation and sustained financing. The reason for this is that younger firms face uncertainty concerning revenue flows and costs (Javanovic, 1982) and these firms face risk- taking around investments and innovations (Gort and Klepper, 1982; Miller and Friesen, 1984; Dickinson, 2011). Younger firms are concerned largely with achieving growth objectives and ensuring that they can adequately compete and have sufficient resources to expand into new markets and to develop new product lines, and hence are less likely to be concerned with

engaging in positive CSR activities (Ramaswamy et al., 2008). Legitimacy with key stakeholders by way of increased positive CSR activities is likely to be less important as compared to achieving financial objectives. The need to conserve capital or to meet the minimum capital needs of the firm is less critical for mature firms, so these firms can expend greater resources in ensuring they engage in, and adequately communicate their CSR activities (Hasan and Habib, 2017). Certainty and reduced risk relating to current (and possibly future) earnings and cash flows may mean that mature stage firms have reduced risk of financial distress and a higher propensity to pursue positive CSR arrangements including communication of those activities.

The reason is managers of these firms are likely to have a better understanding of the environment in which the firm operates and have more resources at their disposal which may allow them to identify opportunities to engage in, and communicate positive CSR activities. Indeed, Waddock and Graves (1997) and Elsayed and Paton (2007) argue that the existence of funds is a key determinant of whether managers decide to engage in positive CSR activities. Moreover, if firms have excess cash, and relatively higher levels of agency costs, management of mature stage firms will be incentivised to re-invigorate the firm by engagement in positive CSR programs (Jawahar and McLaughlin, 2001; Elsayed and Paton, 2007). To do so may enhance a firm’s competitive and reputation position in the market. In addition, managers of mature stage firms are likely to be mindful of the potential reputational costs associated with poor CSR engagement and communication. In essence, based on the difference in economic fundamentals between young and older firms, the dynamic between CSR activities and financial distress is magnified (Helfat & Peteraf, 2003). Mature firms with steady-state investments, combined with effective legitimacy with society through more extensive positive CSR activities, are likely to

face reduced financial distress. The reason is mature firms capitalise on their relations with key stakeholders, and society as a whole, to maintain reputation and ensure that this also assists in sustaining competitive advantage and financing opportunities. Thus, the association between positive CSR performance and financial distress is likely to be moderated by firm life cycle stages.

Resource-based theory assumes that firms differ in terms of their bundle of resources (e.g., financial, physical, human capital, technological, reputation and organizational resources) and capabilities (Barney, 1991; Grant, 1991) and that these firmspecific resources and capabilities are crucial in explaining firms’ growth, performance (Penrose, 1959) and ability to spend money for philanthropic purposes (Campbell, 2007). According to this view, the resource base and capabilities of mature firms are large, diverse and rich, while those of young and declining firms are small, concentrated and limited. Firms in the introduction stage of the life cycle lack an established customer base and suffer from knowledge deficits about potential revenues, costs and industry dynamics (Jovanovic, 1982). These firms suffer from ‘‘liability of newness” and are exposed to initial exit probabilities.

Although growth firms experience dramatic increases in sales and in the number of products, they are subject to acute market competition. Growth firms invest more in product modification and improvement than in product differentiation (Hay and Ginter, 1979). Firms in the shake-out and decline stages have limited and/or downgraded resources and resource combinations. These firms focus more on survival strategies. It follows, then, that firms with such fragile financial performance are likely to jeopardize shareholder value should they invest in CSR. It is also likely that firms in the aforementioned stages may be less inclined to meet even

the minimum threshold of socially responsible behavior (Campbell, 2007). Thus, limited capabilities and resource bases constrain these firms in using valuable, scarce funds for socially responsible projects, and this effectively reduces their CSR engagements.

However, given the reputational and strategic values associated with CSR involvement, competing arguments can be advanced suggesting that early-stage firms are equally likely to invest in CSR activities. Younger firms are in greater need of stakeholder support given their need for external resources. CSR engagement can be an effective tool for garnering such support. Although CSR is costly, the marginal benefit of CSR investments may be greater for younger firms than their mature counterparts. Udayasankar (2008) models small firms’ participation in CSR activities across three firm attributes: visibility, performance and organizational complexity. Less visible firms may use CSR as a legitimacy tool to access external resources for which they have a greater need than mature firms. With respect to resource availability as a precursor for CSR investments, Udayasankar (2008) argues that even resource-constrained firms might benefit from CSR activities, since CSR participation can enable constrained firms to gain exclusive access to critical resources.

Nonetheless, the extant studies overwhelmingly show that resource availability dominates firms’ CSR investment decision (Campbell, 2007; Clarkson et al., 2011). CSR investments are costly, and some of them are often irreversible: the socalled strategic CSR investments. Thus, we argue that the irreversible nature of such investments as well limited available resources will constrain younger firms’ capacity to make meaningful CSR investments. On the other hand, mature firms have a well-established customer base and focus more on product differentiation strategies. As a strategic response to the threat from competitors, mature firms can exploit

strategies to create a unique reputation that cannot be imitated easily (McWilliams, 2002), and one way of achieving this is to invest in environmental and social reputation (Fombrun & Shanley, 1990). The expertise and abilities emanating from organizational maturity allow these firms to make meaningful CSR investments. Specialization in CSR activities by reorganizing or reallocating resources can be achieved by firms with a larger scale of operations. Such specialization allows mature firms to participate actively in CSR activities by reducing their costs (Udayasankar, 2008). Viewed from this perspective, we posit that mature firms, owing to their adequate resource base, capacities and superior competitive advantages, should be in a better position to invest sufficiently in CSR-related activities.

# Theoretical Framework

The theorectical framework identifies the several theory within which the study is based on. In this regards, the stakeholder theory, Agency theory and Firm life cycle theory were found sutiable for the study and discussed below

# Stakeholder Theory

The theory holds that companies have a social responsibility that requires them to consider the interests of all parties affected by their actions. Castelo and Liam (2007) point out that the theory is based on the notion that beyond shareholders, there are several stakeholders with an interest in the actions and decisions of companies. The theory affirms that managers need to focus on fulfilling the demands of various stakeholders such as customers, employees, suppliers, and local communities who have the potential to influence or can be influenced by corporations’ activities. Stakeholder theory suggests that a company is obligated to answer to a variety of stakeholders including shareholders, suppliers, customers, government agencies,

employees and many more (Freeman, 1984). Compliance with such an obligation (or social responsibility) ranges from profit maximisation to social awareness and community service (Lantos, 2001). In order words, stakeholder theory suggests that firms, in order to survive and to gain support from stakeholders, need to engage in CSR activities. This theory according to Watts & Zimmerman (1978), assumes that on social and environmental information by an organisation is as a result of the pressure from stakeholders such as communities, customers, employees, environment, shareholders and suppliers. The basic proposition of this stakeholder theory is that a firm’s success is dependent upon the successful management of all the relationships that a firm has with its stakeholders. The stakeholder theory asserts that corporation’s continued existence requires the support of the stakeholders and their approval must be sought and the activities of the corporation adjusted to gain that approval (Chan, 1996). The more powerful the stakeholders, the more the company must adapt.

Previous research which utilized these theories shows that organizations respond to the expectations of stakeholder groups specifically and more generally through the provision of social and environmental information within annual reports and in so doing reveal the legitimation motives underlying such organization’s (Mgbame and Ilaboya, 2013). According to stakeholder theory, the economic performance of a firm affects management’s decision to engage in Corporate Social Responsibility Reporting. When companies are not performing well, economic demands take precedence over social and environmental responsibility expenditures (Roberts, 1992). Stakeholder theory postulates a positive relationship between economic performance and the level of decision by a company to engage in CSSR.

Successful stakeholder management, in turn, depends on efficient board composition and decision-useful CSR reporting and, ultimately, can lead to stakeholder trust (Velte, 2017). This theory concludes that CSR is a way to show a good image to these stakeholders to boost long- term profits because it would help to retain existing customers and attract new ones. The reputation of the company can be enhanced by CSR and CG, both working together. Consequently, it can strengthen the relations with key stakeholders and can mitigate agency conflicts. In this way, engagement in CSR would be positively related to effective mechanisms for CG (Aguilera, 2007). Therefore, companies seek congruence between their organizational actions and values of its relevant and general public or stakeholders.

# Agency Theory

The agency theory is a well-known concept which forms the basis in explaining information asymmetry. The link between corporate governance and reporting emerges from Jensen and Meckling’s (1976) agency theory framework under which it is assumed that management can exploit the information asymmetry to act in a manner that is contrary to the interests of shareholders (Rao & Tilt, 2013). In 1976 Jensen and Meckling introduced agency theory which suggests that self- interested individuals (agents) are ‘opportunistic’ (Aguilera, 2005) hence less likely to protect the interests of principals (owners) and more likely to act in their own interests such as empire building, the consumption of corporate resources as perquisites, the avoidance of optimal risk investments, and manipulating financial figures to optimize compensation (Dey, 2008). In order to resolve such agency dilemmas corporate governance mechanisms have evolved (Clarke, 2004) where shareholders use a range of governance mechanisms to ensure that agents act in the best interests of principals. One way of

mitigating such an agency problem is to reduce information asymmetry between management and shareholders (Donnelly & Mulcahy, 2008), and this is possible through one of the important qualities of governance, i.e. transparency/accountability. Transparency as an integral part of corporate governance (Htay, 2012) minimises the asymmetric information (Hermalin and Weisbach, 2007) and ultimately enhances overall corporate . This relationship between governance, transparency and is well argued by Htay (2012) who suggest that of information / transparency is an integral part of corporate governance as higher could reduce information asymmetry which not only clarifies the conflicts of interests between shareholders and management but also makes corporate insiders accountable. Given that boards of directors are major players in corporate governance, board composition is likely to have some influence on CSR. In general, an agency perspective is invoked to explain how higher‐quality boards would be willing to be more transparent and accountable through greater voluntary , so as to reduce information asymmetry arising from the difference in ownership and management.

In another view based on the agency theory of Jensen and Meckling (1976), the researchers Barnea and Rubin (2010) consider that the engagement between CSR and CG can be seen as a relationship between managers and shareholders (principal-agent). The authors agree that increasing in CSR expenditure can be consistent with firm value maximization in order to answer stakeholders’ preferences. On the other hand, they argue that a firm’s insiders (managers and large blockholders) may seek to overinvest in CSR for their private benefit to the extent that doing so improves their reputations as good global citizens and has a ‘‘warm-glow’’ effect.

# Firm life cycle theory

Mueller (1972) proposed a formal theory that a firm has a relatively well-defined life cycle. Drawing on the work of Knight (1921) and Schumpeter (1934), Mueller (1972) posits that a firm originates in an attempt to exploit an “innovation involving a new product, process, marketing or organizational technique.” In its initial stages, the firm invests all available resources in developing the innovation and improving its profitability. The firm’s growth is likely to be slow until it has successfully sorted out “teething issues” and establishes a foothold in the market. Thereafter, the enterprise will grow rapidly, as it enters new markets and expands its customer base before any major competition can arise. The agency problem is either absent or not significant at these initial stages. After a while, competitors begin to enter the market, adopting and improving upon the pioneering firm’s innovations. As existing markets become saturated and new markets are harder to find, the growth of the firm begins to slow down. To maintain growth and profitability, the firm needs to generate innovations. However, as the firm grows as an organization, its ability to process information deteriorates, and the risk-taking incentive of the average manager diminishes.

In summary, under the life cycle theory proposed by Mueller (1972), the typical firm will display an S-shaped growth pattern, with a period of slow growth at start-up leading to a period of rapid growth and eventually to maturity and stagnation or slow growth. The life cycle theory of Mueller (1972) has been adopted by several accounting researchers (Castanias & Helfat, 2001, Granlund & Taipaleenmaki, 2005, Christensen, 2003; Sudarsanam and Lai, 2001;Tofigh 2016; Moshtagha, Abbaszadehb, Nowghabic, and Nowghabid, 2014; Cohen and Zarowin’s 2010; Dehdar 2007; Osta and Qytasy 2012; Liu and Wysocki 2005; and Dickinson, 2011) as a

framework for explaining the evolutionary path of several accounting practices which includes corporate social responsibility amongst others.

# CHAPTER THREE METHODOLOGY

# 3.1. Introduction

This section will deal with the methodology employed by the researcher in conducting the research work. The chapter will cover the research design, the population and sample, sampling technique, sources of data, method of data analysis and model specification.

# 3.2 Research Design

The ex-post facto research design was used in this research. This is a kind of research design in which the researcher predicts the possible causes behind an effect that has already occurred. Kerlinger (1970) notes that *ex post facto* research is one in which the independent variable or variables have already occurred and in which the researcher starts with the observation of a dependent variable or variables. Essentially, the researcher studies the independent variable or variables in retrospect for their possible relationship to, and effects on, the dependent variable or variables.

# Population

The population of the research study comprises of all non-financial firms quoted on the floor of the Nigerian Exchange Group. As at December 2020, there are about 80 non-financial companies quoted on the Nigerian Exchnage Group (NXG, 2019) and this will also form the population for the study.

# Sample Size

The representative sample size was calculated with the certainty that the population is known (Krejcie & Morgan, 1970), the formula of sample size as shown below

S = X² NP (1-P)

D²(N-1) + X²P(1-P)

Where:

X² = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841). S = The sample size

N = The population size

P = Population portion (assumed to be 0.50)

D = Degree of accuracy (Expressed as a portion = 0.05)

|  |  |  |
| --- | --- | --- |
| S | = | 3.841 × 80 × 0.5 ×0.5 |
|  |  | (0.05² × 79) + 3.841 × 0.5 ×0.5 |
| S | = 66 |  |

Based on the formula, the sample for the study is 66 non-financial companies but in order to further improve sample robustness, the study eventually used a sample size of 73 companies.

# Sampling Technique

The method of sampling was done using the simple random sampling technique. Simple random sampling has the major strengths that justify its choice in this study. Notably, among its strengths, it tends to yield representative samples each selection is independent of other selections, and every possible combination of sampling units has an equal and independent chance of being selected.

# Sources of Data

Secondary data was used for this study. The data was retrieved from corporate annual reports of the sampled quoted on the Nigeria Stock Exchange companies for the period 2010- 2019 financial years. The researcher utilizes only corporate annual reports because they are readily available, accessible and also provide a greater potential for comparability of results.

# Method of Data Analysis

This study employed descriptive statistical methods and will includes descriptive techniques such as the mean, standard deviation, range, frequency distribution. More

importantly, the random effects (RE) and fixed effects (FE) regression will be estimated. The Hausman test for both random and fixed models will be conducted to enable us to determine which regression outcome is better. Panel data regression is chosen because of the multidimensional nature of the data which has both time or periodic dimension and also cross- sectional dimension. In addition, the technique has other advantages and strengths such as its ability to incorporate and account for individual-specific heterogeneity, provide more data variation and degrees of freedom and also ensure the presence of minimal less collinearity. Furthermore, the panel regression is also able to detect those unobserved effects in either cross- section or time-series data.

# Normality

The normality test will be used to establish the behaviour of the regression variable. It will help us determine if the regression variables follow the standard normal distribution. The Jarque-Bera test statistic will be used to test the normality. If the residuals are distributed normally, the statistical histogram will assume a bell-shape structure. In [statistics](https://en.wikipedia.org/wiki/Statistics), the Jarque- cBera test is a [goodness-of-fit](https://en.wikipedia.org/wiki/Goodness-of-fit) test of whether sample data have the [skewness](https://en.wikipedia.org/wiki/Skewness) and [kurtosis](https://en.wikipedia.org/wiki/Kurtosis) matching a [normal distribution](https://en.wikipedia.org/wiki/Normal_distribution). The [test statistic](https://en.wikipedia.org/wiki/Test_statistic) *JB* is defined as



where *n* is the number of observations (or degrees of freedom in general); *S* is the

sample [skewness,](https://en.wikipedia.org/wiki/Skewness) *C* is the sample [kurtosis,](https://en.wikipedia.org/wiki/Kurtosis) and k is the number of regressors

# Testing for Multicollinearity

Multicollinearity is a situation in which an exact or almost exact linear relationship exists between some or all the explanatory variables, that is, that they are perfectly correlated (Iyoha,

2004). If this relationship exists, the parameter co-efficient will be indeterminate, and there will be large standard errors of the estimated coefficients. Various statistical methods such as using the magnitude of tolerance value and checking the significance of the t-ratio and f-statistic were put forward to test the degree of multicollinearity. However, the study used a covariance matrix to test for it.

# Serial Correlation Test

Autocorrelation also called serial correlation refers to a situation where the statistic error term is correlated with itself overtime. Thus, autocorrelation is present if: Ut = f(Ut-1). Where Ut

= stochastic error term at time t. Thus, autocorrelation occurs when there is some degree of stochastic dependence between successive values of the disturbance term. In testing for autocorrelation, the conventional method is to use the Durbin Watson statistic. This is a test of first-order serial correlation. It uses the statistic d, which is the weighted ratio of the sum of squared differences in successive residuals.



If *et* is the [residual](https://en.wikipedia.org/wiki/Errors_and_residuals_in_statistics) associated with the observation at time *t*, then the [test statistic](https://en.wikipedia.org/wiki/Test_statistic) is

where *T* is the number of observations. *et* is the [residual](https://en.wikipedia.org/wiki/Errors_and_residuals_in_statistics) associated with the observation at time *t*. The value of *d* always lies between 0 and 4. If the Durbin–Watson statistic is substantially less than 2, there is evidence of positive serial correlation. To test for **positive autocorrelation** at

significance *α*, the test statistic *d* is compared to lower and upper critical values (*dL,α* and *dU,α*):

If *d* < *dL,α*, there is statistical evidence that the error terms are positively autocorrelated.

If *d* > *dU,α*, there is **no** statistical evidence that the error terms are positively autocorrelated.

If *dL,α* < *d* < *dU,α*, the test is inconclusive.

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The Breusch-Godfrey Lagrange Multiplier test of serial correlation was adopted in this study. The LM test is generally used to test the null hypothesis that the errors are serially independent, against the alternative hypothesis.

# Heteroskedasticity Test

Heteroskedasticity means the absence of homoscedasticity, the constant variance assumption. It implies the absence of non-constant variance leading to the breakdown of the BLUE properties in which the efficiency and consistency property are lost. Using the Breusch- pagan-Godfrey test, decision rule is to conclude that there is no Heteroskedasticity if the F- statistic and observed R- square values are respectively greater than the critical values at 5% level. In the absence of this (i.e. if the critical values at 5% is greater than the F-statistic and observed R-square value), we conclude that there is homoscedasticity.

# 3.7.5. Ramsey RESET Test

This is often referred to as the regression model specification error test. Ramsey (1969) test was conducted in this study to test for a regression specification error. The test helps to ensure that our model was not mis-specified. The decision rule is that if the F-statistic with a p- value is greater than 0.05, it indicates no misspecification of the model.

# Model Specification

The focus of the study is to examine firm structure and corporate social responsibility : the moderating role of firm life cycle in Nigeria. In line with the objectives of the study, the

models to be examined are presented both in their functional forms and in the econometric specifications. The models are presented below;

# Panel Estimation Model

The fundamental advantage of a panel data set over a cross section is that it will allow the researcher great flexibility in modelling differences in behaviour across individuals. The basic framework for this discussion is a regression model of the form



There are *K* regressors in x*it*, *not including a constant term.* The heterogeneity, or individual effect is zi*α* where z*i* contains a constant term and a set of individual or group specific variables, which may be observed,

If zi is unobserved, but correlated with xit, then the least squares estimator of β is biased and inconsistent as a consequence of an omitted variable. However, in this instance, the model



Where *αi* =z*i α*, embodies all the observable effects and specifies an estimable conditional mean. This **fixed effects** approach takes *αi* to be a group-specific constant term in the regression model.

It should be noted that the term “fixed” as used here signifies the correlation of *ci* and **x***it*, not that

*ci* is nonstochastic.

If the unobserved individual heterogeneity, however formulated, can be assumed to be uncorrelated with the included variables, then the model may be formulated as



that is, as a linear regression model with a compound disturbance that may be consistently, albeit inefficiently, estimated by least squares. This **random effects** approach specifies that *ui* is a group-specific random element, similar to *εit* except that for each group, there is but a single draw that enters the regression identically in each period.

This study adapts the model by Bruns (2017) in analyzing the relationship between corporate social responsibility and its determinants. Therefore, the following equation is formulated:

CSRDit = β0 +β1FSIZEit +β2FPROFit +β3FLEVit + β4FAGEit + β5FINDit + εit Introducing the moderating effect of firm life cycle, the model becomes;

CSRDit = β0 +β1FSIZEit \* FLCit +β2FPROFit \* FLCit +β3FLEVit\* FLCit + β4FAGEit \* FLCit + β5FINDit \* FLCit + εit

**3.1 Measurement of Variables**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Variable** | **Description** | **Measurement** | **Aprori**  **Sign** | | **Sources** |
| **Dependent Variable** | | | | | |
| CSRD | Corporate Social Responsibility Financial Statement | Corporate social responsibility financial statement is measured in line with the Global Reporting Index. |  | | Mgbame (2012), Buhr and Freedman(2001), Wiseman(1982) and Egbunike and  Tarilaye (2017). |
| **Independent Variables** | | | | | |
| FSIZE | Firm size | Firm size is measured by the natural logarithm of total assets. | | + | Bonga (2015) |
| FIND | Industry type | This is measured as “1” | | + | Bandara (2016) |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | for environmentally sensitive industries and  “0” if otherwise | |  |  |
| FLEV | Firm leverage | This is measured as the ratio of debt to total assets. | | + | Habbash (2016) |
| FPROF | Firm Profitability | This is measured as total profit after tax divided by  the total assets. | | + | Adeyemi (2016) |
| FAGE | Firm age | This is measured by the difference between the annual report date and the firm establishment  date. | + | | Alhazmi (2017). |
| FLC | Firm life cycle | Cash flow approach |  | | Adeyemi (2016) |

**Source:Researcher’s Compilation (2020).**

# CHAPTER FOUR PRESENTATION AND ANALYSIS OF RESULT

# 4.1. INTRODUCTION

This chapter contains the presentation, analysis and interpretation of the data collected for this research work. Consequently, it entails the application of both mathematical and statistical techniques to provide the basis for the testing of the research hypothesis. Hence, it is a vital part of any research work, since it forms the basis for recommendation and conclusions at the end of the research. The models specified in the previous chapter are examined empirically. The preliminary analysis of the data is first conducted (descriptive and correlation analysis). Thereafter, the regression analysis is conducted. The results are presented and interpreted below;

# 4.2 PRESENTATION AND ANALYSIS OF RESULT

This section examines the presentation and analysis of the estimations conducted using the various statistical methods. The preliminary analysis is first examined and here we discuss the descriptive statistics results, the Pearson product moment correlation results and variance inflation factor test for multicollinearity is also examined. After that, the panel regression results is presented. The results are presented and analysed below;

Table 4.1. Descriptive Statistics

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Mean | Max | Min | Std. Dev. | Skewness | Kurtosis | JB | Prob | Obs |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CSR | 0.59752 | .944 | 0.284 | 0.232018 | 1.170871 | 7.555657 | 786.0397 | 0.000 | 719 |
| FIND | 0.68245 | 1 | 0 | 0.465847 | -0.783855 | 1.614429 | 130.9609 | 0.000 | 718 |
| FLEV | 0.60687 | 2.03 | 0 | 0.23231 | 1.168271 | 7.530339 | 777.3368 | 0.000 | 718 |
| FAGE | 24.6787 | 53 | 15 | 12.8738 | -0.2437 | 1.794719 | 50.63741 | 0.000 | 719 |
| FSIZE | 7.03797 | 9.02 | 5.09 | 0.7578 | 0.093466 | 2.510842 | 8.203739 | 0.0165 | 718 |
| FPROF | 0.48164 | 2.966 | 0.001 | 0.2922 | 1.572132 | 11.29664 | 2332.1 | 0.000 | 711 |
| INTRO | 0.08762 | 1 | 0 | 0.2829 | 2.916974 | 9.508735 | 2288.774 | 0.000 | 719 |
| GROW | 0.15577 | 1 | 0 | 0.36289 | 1.898462 | 4.604157 | 508.9905 | 0.000 | 719 |
| MAT | 0.53825 | 1 | 0 | 0.49888 | -0.15344 | 1.023544 | 119.8499 | 0.000 | 719 |
| DEC | 0.04312 | 1 | 0 | 0.203258 | 4.498734 | 21.23861 | 12390.8 | 0.000 | 719 |

Source: Researcher’s Compilation (2021)

Table 4.1 shows the descriptive statistics for the variables and as observed, the mean for CSR-index is 0.597 which is slightly above average and suggest that on the average companies in the sample are performing quite moderately in relation to their CSR . However, there is room for significant movements up the trajectory especially in relation to quality of . The standard deviation stood at 0.232 and Jacque bera statistics p-value (0.000) suggests the unlikely presence of outlier values in the series. FIND has a mean of 0.682 which indicates that about 68.2% of the firms in the sample are environmentally sensitive firms. The standard deviation at 0.466 and Jacque bera statistics p-value (0.000) suggests the unlikely presence of outlier values in the series. FLEV has a mean of 0.607 with maimum and minimum values of 2.03 and 0 respectively which indicates that some companies in the distribution are not indebted The standard deviation stood at 0.232 and Jacque bera statistics p-value (0.000) suggests the unlikely presence of outlier values in the series. The average firm age for firms in the distribution stood at approximately 25yrs with maimum and minimu of 15yrs respectively. The standard deviation stood at 12.873

and Jacque bera statistics p-value (0.000) suggests the unlikely presence of outlier values in the series. The average FSIZE stood at 7.038 with maimum and minimu of 9.02 and 5.09 respectively. The standard deviation stood at 0.757 and Jacque bera statistics p-value (0.0165) suggests the unlikely presence of outlier values in the series. The average FPROF measured by return on equity stood at 0.482 with maimum and minimum of 2.966 and 0.001 respectively. The standard deviation stood at 0.2922 and Jacque bera statistics p-value (0.0165) suggests the unlikely presence of outlier values in the series. The descriptive statistics for the life cycle stages reveals that about 8.8% of the sample companies data exhibited evidence of introductory stage, 15.6% of the sampled companies data exhibited evidence of the growth stage, 54.4% of the sampled companies data exhibited evidence of mature stage and 4.1% of the sampled companies data exhibited evidence of decline stage. The statistics show that companies in the introductory stage are the fewest while those in the growth stage are the highest followed by those in the mature stage. The Jacque-bera probability values for all the variables are all in excess of 0.05 which suggest the unlikely presence of outliers in the distribution and they variables follows a normal distribution pattern.

Table 4.2: Pearson Correlation

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Probability | CSR | FAGE | FLEV | FROE | FSIZE | IND | INTRO | MAT | GROW | DEC |
| CSR | 1 |  |  |  |  |  |  |  |  |  |
| FAGE | 0.0784 | 1 |  |  |  |  |  |  |  |  |
| Prob | 0.0369 |  |  |  |  |  |  |  |  |  |
| FLEV | 0.699 | 0.0779 | 1 |  |  |  |  |  |  |  |
| Prob | 0.000 | 0.038 |  |  |  |  |  |  |  |  |
| FROE | 0.068 | -0.14492 | 0.0700 | 1 |  |  |  |  |  |  |
| Prob | 0.069 | 0.0001 | 0.0625 |  |  |  |  |  |  |  |
| FSIZE | 0.091 | 0.089 | 0.0893 | -0.0058 | 1 |  |  |  |  |  |
| Prob | 0.0159 | 0.0173 | 0.0174 | 0.8766 |  |  |  |  |  |  |
| IND | 0.0849 | 0.4758 | 0.085 | -0.0096 | 0.2232 | 1 |  |  |  |  |
| Prob | 0.0238 | 0.000 | 0.0233 | 0.799 | 0.0000 |  |  |  |  |  |
| INTRO | 0.1061 | -0.0414 | 0.1069 | 0.0735 | -0.0321 | -0.028 | 1 |  |  |  |
| Prob | 0.0047 | 0.2705 | 0.0044 | 0.0504 | 0.3928 | 0.4596 |  |  |  |  |
| MAT | -0.1470 | 0.04775 | -0.1475 | -0.0076 | 0.05065 | 0.0644 | -0.32842 | 1 |  |  |
| Prob | 0.0001 | 0.2041 | 0.0001 | 0.839 | 0.1779 | 0.0866 | 0.000 |  |  |  |
| GROW | 0.0454 | -0.1186 | 0.0458 | 0.1668 | 0.10137 | -0.047 | -0.12911 | -0.4671 | 1 |  |
| Prob | 0.2278 | 0.0016 | 0.2237 | 0.000 | 0.0069 | 0.2144 | 0.0006 | 0.000 |  |  |
| DEC | -0.03013 | -0.0232 | -0.0302 | -0.0692 | -0.0189 | 0.0059 | -0.0633 | -0.2291 | -0.09 | 1 |
| Prob | 0.4231 | 0.538 | 0.4217 | 0.0657 | 0.6153 | 0.8744 | 0.092 | 0.000 | 0.0164 |  |

Source: Researcher’s Compilation (2021)

Table 4.2 presents the correlation results and as observed, the correlations are examined across the corporate life cycle stages. Particularly, the study is concerned with the correlations between CSR and firm attributes as well as the life cycle stages. CSR is positively correlated with leverage (FLEV) and significant at 5% [r=0.699,p=0.000] and hence the result suggest that increases in firm leverage is associated with increases on CSR and vice-versa. CSR is positively correlated with profitability (FPROF) and this is significant at 10% [r=0.068,p=0.069]. Hence

the result suggest that increases in firm profitability is associated with increases in CSR. CSR is positively correlated with Firma age (FAGE) and significant at 5% [r=0.0784,p=0.0369] and hence the result suggest that older firms are associated with increases in CSR. FSIZE is positively correlated with CSR and this is significant at 5% [r=0.091,p=0.0159]. Hence the result suggest that increases in firm size is associated with increases in CSR. CSR is negatively correlated with Maturity stage (MAT) and this is significant at 5% [r=-0.1470, p=0.001] and thus result suggest that firms in the mature stage may be associated with declining CSR . In addition, CSR is negatively correlated with introductory stage (DEC) and this is significant at 5% [r=- 0.030, p=0.423] and thus result suggest that firms in the decline stage may also be associated with declining CSR though this is not significant. CSR is positively correlated with Growth stage (GROW) though not significant at 5% [r=0.0454,p=0.2278]. CSR is positively correlated with introductory stage (INTRO) and this is significant at 5% [r=0.1061,p=0.0047]. Hence the result suggest that firms at the introductory stage will engage in CSR . However, it suffices to note that correlations are limited in terms of inferential abilities and that is because they do not necessarily imply functional causality in a strict sense.

4.3. Multicollinearity Test

|  |  |
| --- | --- |
| C | NA |
| FSIZE | 1.5413 |
| FLEV | 1.0662 |
| FAGE | 1.5938 |
| FIND | 1.0641 |
| FPROF | 1.9224 |
| *INTRO* | 1.8961 |
| *GROW* | 1.738 |
| *MAT* | 2.311 |
| *DEC* | 1.8961 |

**Source:** Researcher’s compilation (2021) using Eviews 10.

. In this study, the variance inflation factor test is constructed to test for multicollinearity. Basically, the VIF explains how much of the variance of a coefficient estimate of a regressor has been inflated, as a result of collinearity with the other regressors. Essentially, VIFs above 10 are

seen as a cause of concern as observed, none of the variables have VIF’s values more than 10 and hence none gave serious indication of multicollinearity.

Table 4.4. Baseline Regression Result

|  |  |  |  |
| --- | --- | --- | --- |
| ***Variable*** | **Aprori Sign** | Fixed effects estimates | Random effects estimates |
| *C* | + | 0.7955\*\*\* (0.0644)  {0.0000) | 0.6325\*\*\* (0.0919)  {0.000} |
| FSIZE |  | -0.0227\*\*\* | 0.0003 |
|  | + | (0.007) | (0.0128) |
|  |  | {0.0009} | {0.9812} |
| FLEV |  | -0.0002 | 0.0348 |
|  | + | (0.0254) | (0.0292) |
|  |  | {0.9954} | {0.2348} |
| FAGE |  | -0.00180\*\*\* | -0.0009 |
|  | + | (0.0007) | (0.0009) |
|  |  | {0.0080} | {0.2680} |
| FIND |  | 0.1070\*\*\* | 0.0320 |
|  | + | (0.0109) | (0.0269) |
|  |  | {0.000) | {0.2353} |
| FPROF |  | -0.0458\*\*\* | -0.0297 |
|  | + | (0.0086) | (0.0241) |
|  |  | {0.000} | {0.2162} |
| *AR (3)* |  | -0.0373 |  |
|  | + | (0.0282) |
|  |  | {0.181} |

*Model Parameters*

|  |  |  |  |
| --- | --- | --- | --- |
| R2 |  | 0.740 | 0.006 |
| Adjusted R2 |  | 0.691 | 0.0007 |
| F-statistic |  | 15.139 | 0.892 |
| Prob(F-stat) |  | 0.000 | 0.485 |
| Durbin-Watson |  | 1.9 | 1.138 |

*Model Diagnostics*

|  |  |  |  |
| --- | --- | --- | --- |
| χ2Hetero | 0.1883 | χ2Norm | 0.653 |
| χ2Serial/Corr | 0.3927 | χ2Hausman | 13.9 |
|  |  |  | 0.000 |

Source: Researcher’s Compilation (2021)

Table 4.3 show the regression results examining the impact of firm attributres on CSR . The model summary and diagnostics reveal that R2 and Adj R2 stood at 74.0% and 69.1% respectively which suggests that firm attributes account for about 74% of systematic variations in CSR of the firms in the sample. The χ2Hetero p-value (0.1883) implies the homoscedastic behaviour of the errors and the χ2Serial/Corr p-value (0.3927) also reveals the absence of serial correlation. In addition, χ2Norm p-value (0.653) reveals that the series follow a normal distribution. The χ2Hausman statistic and p-value (13.9, p=0.00) indicates that the fixed effects model estimation is the appropriate estimation for the model indicating the existence of significant correlations between firms specific disturbances and the beta’s. The F-stat of 15.139 (p-value = 0.00) which is significant at 5% and suggest that the hypothesis of a significant linear relationship between the dependent and independent variables cannot be rejected. It is also indicative of the joint statistical significance of the model.

The analysis of coefficients reveals that FSIZE has a negative effect on CSR (-0.0227, p=0.0009) and significant at 1% and this implies an increase in the firm size results in a decline in CSR . FLEV has a negative effect on CSR (-0.0002, p=0.0254) and significant at 5% and this implies an increase in the firm leverage results in a decline in CSR and hence highly levered firms can ehibit declining CSR . FAGE has a negative effect on CSR (-0.0018, p=0.0080) and significant at 1% and this implies that the older the firms gets, the lower the CSR and hence younger firms tend to be characterized with increasing CSR . FIND has a positive and significant coefficient (0.1070, p=0.000) at 1% and this implies that the type of industry and particularly environmental sensitive industries tend to significantly improve CSR . FPROF has a negative

effect on CSR (-0.0458, p=0.000) and significant at 1% and this implies that firms that are more profitable appear to disclose less of CSR imformation.

Table 4.5. Firm attributes and INTRO stage Moderating Regression Result

|  |  |  |  |
| --- | --- | --- | --- |
| ***Variable*** | **Aprori Sign** | Fixed effects estimates | Random effects estimates |
| *C* | + | 0.6399\*\*\* (0.0033)  {0.000) | 0.6395\*\*\* (0.0126)  {0.000} |
| FSIZE\*FLCINTRO | + | 0.01113\*\* (0.0047)  {0.0175} | 0.00535  (0.0094)  {0.5687} |
| FLEV\*FLCINTRO | + | -0.00833\*\* (0.04109)  {0.0430} | 0.0293  (0.0887)  {0.7413} |
| FAGE\*FLCINTRO | + | 0.00041  (0.0009)  {0.6564} | 0.001  (0.0016)  {0.6765} |
| FIND\*FLCINTRO | + | -0.02379  (0.02668)  {0.3729) | -0.03928  (0.0444)  {0.3776} |
| FPROF\*FLCINTRO | + | -0.0597  (0.0366)  {0.1036} | -0.0879  (0.0544)  {0.1064} |
| *AR (2 )* | + | 0.0217  (0.0238)  {0.3628} |  |

*Model Parameters*

|  |  |  |  |
| --- | --- | --- | --- |
| R2 |  | 0.728 | 0.006 |
| Adjusted R2 |  | 0.685 | 0.0012 |
| F-statistic |  | 16.788 | 0.8189 |
| Prob(F-stat) |  | 0.000 | 0.5363 |
| Durbin-Watson |  | 1.7 | 1.134 |
| Mean VIF | 2.621 |  |  |

*Model Diagnostics*

|  |  |  |  |
| --- | --- | --- | --- |
| χ2Hetero | 0.472 | χ2Ramsey-Reset | 0.201 |
| χ2Serial/Corr | 0.154 | χ2Hausman | 11.88 |
|  |  |  | 0.000 |

Source: Researcher’s Compilation (2021). ( ) standard errors, { }p-value \*\*\* sig at 1%, \*\* sig at 5% and

\* sig at 1%.

Table 4.5 show the firm attributes and moderating role of firm life cycle regression with focus on the INTRO stage. The model summary and diagnostics reveal that R2 and Adj R2 stood at 72.8% and 68.5% respectively. The χ2Hetero p-value (0.472) implies the homoscedastic behaviour of the errors and the χ2Serial/Corr p-value (0.154) also reveals the absence of serial correlation. In addition, χ2Ramsey-Reset p-value (0.201) reveals that the null hypothesis that the model is correctly specified is accepted. The χ2Hausman statistic and p-value (11.88, p=0.00) indicates that the fixed effects model estimation is the appropriate estimation for the model indicating the existence of significant correlations between firms specific disturbances and the beta’s. The F-stat of 16.79 (p-value = 0.00) which is significant at 5% and suggest that the hypothesis of a significant linear relationship between the dependent and independent variables cannot be rejected. It is also indicative of the joint statistical significance of the model.

The analysis of coefficients reveals that FSIZE\*FLCINTRO has a positive effect on CSR (0.0111, p=0.0175) and significant at 1%. This result implies that firm life cycle particualarly the introductory stage is a significant moderator of the etent to which the firm size effects CSR. Specifically, the result reveals that INTRO stage has a positive and significant moderating effect on the relationship between FSIZE and CSR and hence given the level of the firm size, firms in the introductory stage tend to disclose CSR. Thus irrespective of whether the firm large or small going by the value of its total assets, being in the introductory stage enhamces their CSR practices.

On the contrary, FLEV\*FLCINTRO has a negative effect on CSR (-0.0004, p=0.6564) though not significant at 5%. This result implies that firm life cycle particualarly the introductory stage is not a significant moderator of the etent to which the firm size effects CSR though the sign of the coefficient is negative implying that given the level of the firm leverage, firms in the introductory stage tend to disclose less CSR. FAGE\*FLCINTRO has a positive effect on CSR (0.0004, p=0.6564) though not significant at 5%. This result implies that firm life cycle particualarly the introductory stage is not a significant moderator of the etent to which the firm age effects CSR. The positive coefficient implies that given the firms age, firms in the introductory stage tend to disclose more CSR. The analysis of coefficients reveals that FIND\*FLCINTRO has a negative effect on CSR (-0.02379, p=0.3729) though not significant at 5%. This result implies that the introductory stage is not a significant moderator of the etent to which the firm size effects CSR. Specifically, the result reveals that INTRO stage has a negative and insignificant moderating effect on the relationship between FIND and CSR and hence irrespective of whether the firm is in an environmently sensitive industry or not, being in the introductory stage does not enhance their CSR practices. The analysis of coefficients reveals that FPROF\*FLCINTRO has a negative effect on CSR (-0.0597, p=0.104) though not significant at 5%. This result implies that the introductory stage is not a significant moderator of the etent to which the firm profitability effects CSR. Specifically, the result reveals that INTRO stage has a negative and insignificant moderating effect on the relationship between FPROF and CSR and hence irrespective of whether the firm is profitable or not, being in the introductory stage reduces their CSR practices though quite insignificantly.

Table 4.6. Firm attributes and GROWTH stage Moderating Regression Result

|  |  |  |  |
| --- | --- | --- | --- |
| ***Variable*** | **Aprori Sign** | Fixed effects estimates | Random effects Estimates |
| *C* |  | 0.63802\*\*\* | 0.6545 |
|  | + | (0.0055) | (0.1300) |
|  |  | {0.000) | {0.000} |
| FSIZE\*FLCGROWTH |  | -0.0097\*\* | 0.0036 |
|  | + | (0.0043) | (0.0253) |
|  |  | {0.0248} | {0.887} |
| FLEV\*FLCGROWTH |  | 0.1370\*\* | -0.0277 |
|  | + | (0.0696) | (0.0383) |
|  |  | {0.0496} | {0.4682} |
| FAGE\*FLCGROWTH |  | -0.00234\* | -0.0239 |
|  | + | (0.0013) | (0.0187) |
|  |  | {0.0721} | {0.2009} |
| FIND\*FLCGROWTH |  | 0.0189 | -0.0537 |
|  | + | (0.0133) | (0.0454) |
|  |  | {0.1569) | {0.2376} |
| FPROF\*FLCGROWTH |  | 0.0469\* | -0.0124 |
|  | + | (0.0375) | (0.0216) |
|  |  | {0.2118} | {0.5674} |
| *AR (3)* |  | 0.0138\* | -0.0954\* |
|  | + | (0.0318) | (0.0281) |
|  |  | {0.6643} | {0.000} |

*Model Parameters*

|  |  |  |  |
| --- | --- | --- | --- |
| R2 |  | 0.706 | 0.0126 |
| Adjusted R2 |  | 0.658 | 0.004 |
| F-statistic |  | 14.99 | 1.5314 |

|  |  |  |  |
| --- | --- | --- | --- |
| Prob(F-stat) |  | 0.000 | 0.1650 |
| Durbin-Watson |  | 1.7 | 0.86 |
| Mean VIF | 2.621 |  |  |

*Model Diagnostics*

|  |  |  |  |
| --- | --- | --- | --- |
| χ2Hetero | 0.9229 | χ2Ramsey-Reset | 0.7118 |
| χ2Serial/Corr | 0.2064 | χ2Hausman | 17.06 |
|  |  |  | 0.000 |

Source: Researcher’s Compilation (2021). ( ) standard errors, { }p-value \*\*\* sig at 1%, \*\* sig at 5% and

\* sig at 1%.

Table 4.6 show the firm attributes and moderating role of firm life cycle regression with focus on the GROWTH stage. The model summary and diagnostics reveal that R2 and Adj R2 stood at 71% and 65.8% respectively. The χ2Hetero p-value (0.9229) implies the homoscedastic behaviour of the errors and the χ2Serial/Corr p-value (0.2064) also reveals the absence of serial correlation. In addition, χ2Ramsey-Reset p-value (0.7118) reveals that the null hypothesis that the model is correctly specified is accepted. The χ2Hausman statistic and p-value (17.06, p=0.00) indicates that the fixed effects model estimation is the appropriate estimation for the model indicating the existence of significant correlations between firms specific disturbances and the beta’s. The F-stat of 16.79 (p-value = 0.00) which is significant at 5% and suggest that the hypothesis of a significant linear relationship between the dependent and independent variables cannot be rejected. It is also indicative of the joint statistical significance of the model.

The analysis of coefficients reveals that FSIZE\*FLCGROWTH has a negative effect on CSR (-0.0097, p=0.0248) and significant at 5%. This result implies that firm life cycle particualarly the growth stage is a significant moderator of the extent to which the firm size effects CSR. Specifically, the result reveals that GROWTH stage has a negative and significant moderating effect on the relationship between FSIZE and CSR and hence given the level of the firm size,

firms in the growth stage tend to disclose less CSR. Thus irrespective of whether the firm large

or small going by the value of its total assets, being in the growth stage reduces their CSR practices. FLEV\*FLCGROWTH has a positive effect on CSR (0.1370, p=0.049) and significant at 5%. This result implies that firm life cycle particularly the Growth stage is a significant moderator of the etent to which the firm leverage effects CSR though the sign of the coefficient is positive implying that given the level of the firm leverage, firms in the growth stage tend to disclose more CSR. Thus, irrespective of whether the firm is highly, moderately or lowly levered, being in the growth stage improves their CSR practices.

FAGE\*FLCGrowth has a negative effect on CSR (-0.0023, p=0.0721) though not significant at 5%. This result implies that firm life cycle particualarly the growth stage is not a significant moderator of the extent to which the firm age effects CSR. Going by the sign of the coefficient, irrespective of the firms age, being in the growth stage reduces their CSR practices. The analysis of coefficients reveals that FIND\*FLCGROWTH has a positive effect on CSR (0.0189, p=0.1569) though not significant at 5%. This result implies that the growth stage is not a significant moderator of the etent to which the firm industry effects CSR. Specifically, the result reveals that GROWTH stage has a negative and insignificant moderating effect on the relationship between FIND and CSR and hence irrespective of whether the firm is in an environmently sensitive industry or not, being in the growth stage does not significantl improve their CSR practices. The analysis of coefficients reveals that FPROF\*FLCGROWTH has a positive effect on CSR (0.047, p=0.2118) though not significant at 5%. This result implies that the growth stage is not a significant moderator of the etent to which the firm profitability effects CSR. Specifically, the result reveals that growth stage has a positive and insignificant moderating effect on the relationship between FPROF and CSR and hence irrespective of whether the firm is

profitable or not, being in the growth stage improves their CSR practices though quite insignificantly.

Table 4.7. Firm attributes and Maturity stage Moderating Regression Result

|  |  |  |  |
| --- | --- | --- | --- |
| ***Variable*** | **Aprori Sign** | Fixed effects estimates | Random effects estimates |
| *C* |  | 0.6379 | 0.6448 |
|  | + | (0.0075) | (0.0143) |
|  |  | {0.000) | {0.000} |
| FSIZE\*FLCMATURITy |  | -0.0047 | -0.0066 |
|  | + | (0.0032) | (0.0053) |
|  |  | {0.1483} | {0.2114} |
| FLEV\*FLCMATURIT |  | 0.01866 | 0.0527 |
|  | + | (0.0342) | (0.0441) |
|  |  | {0.2945} | {0.2321} |
| FAGE\*FLCMATURIT |  | -0.0008\* | 0.0003 |
|  | + | (0.0004) | (0.0009) |
|  |  | {0.0553} | {0.7610} |
| FIND\*FLCMATURIT |  | 0.03957\*\*\* | 0.02527 |
|  | + | (0.0136) | (0.0263) |
|  |  | {0.0039) | {0.3369} |
| FPROF\*FLCMATURIT |  | 0.03591 | -0.0389 |
|  | + | (0.0342) | (0.0294) |
|  |  | {0.2945} | {0.1854} |
| *AR (3)* |  | -0.0491\* |  |
|  | + | (0.0290) |
|  |  | {0.0914} |

*Model Parameters*

|  |  |  |  |
| --- | --- | --- | --- |
| R2 |  | 0.715 | 0.008 |
| Adjusted R2 |  | 0.661 | 0.0004 |

|  |  |  |  |
| --- | --- | --- | --- |
| F-statistic |  | 13.291 | 1.063 |
| Prob(F-stat) |  | 0.000 | 0.379 |
| Durbin-Watson |  | 1.9 | 1.151 |

*Model Diagnostics*

|  |  |  |  |
| --- | --- | --- | --- |
| χ2Hetero | 0.3160 | χ2Ramsey-Reset | 0.1374 |
| χ2Serial/Corr | 0.5876 | χ2Hausman | 11.799 |
|  |  |  | 0.000 |

Source: Researcher’s Compilation (2021). ( ) standard errors, { }p-value \*\*\* sig at 1%, \*\* sig at 5% and

\* sig at 1%.

Table 4.7 show the firm attributes and moderating role of firm life cycle regression with focus on the maturity stage. The model summary and diagnostics reveal that R2 and Adj R2 stood at 72% and 66.1% respectively which implies that the moderating model explains about 72% of systematic variations in CSR. The χ2Hetero p-value (0.3160) implies the homoscedastic behaviour of the errors and the χ2Serial/Corr p-value (0.5876) also reveals the absence of serial correlation. In addition, χ2Ramsey-Reset p-value (0.1374) reveals that the null hypothesis that the model is correctly specified is accepted. The χ2Hausman statistic and p-value (11.799, p=0.00) indicates that the fixed effects model estimation is the appropriate estimation for the model indicating the existence of significant correlations between firms specific disturbances and the beta’s. The F-stat of 13.29 (p-value = 0.00) which is significant at 5% and suggest that the hypothesis of a significant linear relationship between the dependent and independent variables cannot be rejected. It is also indicative of the joint statistical significance of the model.

The analysis of coefficients reveals that FSIZE\*FLCMATURITy has a negative effect on CSR (-0.0047, p=0.0148) and not significant at 5%. Specifically, the result reveals that maturity stage has a negative and significant moderating effect on the relationship between FSIZE and CSR and hence given the level of the firm size, firms in the growth stage tend to disclose less

CSR. Thus irrespective of whether the firm large or small, being in the maturity stage reduces

their CSR practices. FLEV\*FLCMaturity has a positive effect on CSR (0.0187, p=0.295) and insignificant at 5%. This result implies that firm life cycle particularly the manturity stage is an insignificant moderator of the etent to which the firm leverage effects CSR though the sign of the coefficient is positive implying that irrespective of whether the firm is highly, moderately or lowly levered, being in the growth stage fails to significantly improve their CSR practices.

FAGE\*FLCmaturity has a negative effect on CSR (-0.0008, p=0.0553) though not significant at 5%. This result implies that firm life cycle particualarly the maturity stage is not a significant moderator of the extent to which the firm age effects CSR. Going by the sign of the coefficient, irrespective of the firms age, being in the maturity stage reduces their CSR practices. The analysis of coefficients reveals that FIND\*FLCmaturity has a positive effect on CSR (0.03957, p=0.0039) and significant at 5%. This result implies that the maturity stage is a significant moderator of the extent to which the firm industry effects CSR. Hence irrespective of whether the firm is in an environmently sensitive industry or not, being in the maturity stage does significantly improve their CSR practices. The analysis of coefficients reveals that FPROF\*FLCmaturity has a positive effect on CSR (0.0359, p=0.295) though not significant at 5%. This result implies that the maturity stage is not a significant moderator of the etent to which the firm profitability effects CSR. Specifically, the result reveals that maturity stage has a positive and insignificant moderating effect on the relationship between FPROF and CSR and hence irrespective of whether the firm is profitable or not, being in the growth stage improves their CSR practices though quite insignificantly.

Table 4.8. Firm attributes and Decline stage Moderating Regression Result

|  |  |  |  |
| --- | --- | --- | --- |
| ***Variable*** | **Aprori Sign** | Fixed effects estimates | Random effects estimates |
| *C* |  | 0.6380 | 0.6385 |
|  | + | (0.0059) | (0.0131) |
|  |  | {0.000) | {0.000} |
| FSIZE\*FLCDECLINE |  | 0.0307\*\* | 0.0134 |
|  | + | (0.0120) | (0.0111) |
|  |  | {0.0115} | {0.2280} |
| FLEV\*FLCDECLINE |  | -0.1535 | -0.1583\* |
|  | + | (0.1086) | (0.0383) |
|  |  | {0.1583} | {0.0588} |
| FAGE\*FLCDECLINE |  | -0.0092\*\*\* | -0.0023 |
|  | + | (0.0025) | (0.0024) |
|  |  | {0.0000} | {0.3351} |
| FIND\*FLCDECLINE |  | 0.2175\*\*\* | 0.0694 |
|  | + | (0.0576) | (0.0731) |
|  |  | {0.0002) | {0.3429} |
| FPROF\*FLCDECLINE |  | -0.0364 | 0.0599 |
|  | + | (0.0650) | (0.1056) |
|  |  | {0.5757} | {0.5707} |
| *AR (3)* |  | -0.0674\* |  |
|  | + | (0.0376) |
|  |  | {0.0738} |

*Model Parameters*

|  |  |  |  |
| --- | --- | --- | --- |
| R2 |  | 0.716 | 0.008 |

|  |  |  |  |
| --- | --- | --- | --- |
| Adjusted R2 |  | 0.663 | 0.0004 |
| F-statistic |  | 13.411 | 0.950 |
| Prob(F-stat) |  | 0.000 | 0.448 |
| Durbin-Watson |  | 1.8 | 1.149 |

*Model Diagnostics*

|  |  |  |  |
| --- | --- | --- | --- |
| χ2Hetero | 0.4630 | χ2Ramsey-Reset | 0.2094 |
| χ2Serial/Corr | 0.5077 | χ2Hausman | 12.050 |
|  |  |  | 0.000 |

Source: Researcher’s Compilation (2021). ( ) standard errors, { }p-value \*\*\* sig at 1%, \*\* sig at 5% and

* sig at 1%.

Table 4.8 show the firm attributes and moderating role of firm life cycle regression with focus on the decline stage. The model summary and diagnostics reveal that R2 and Adj R2 stood at 71.6% and 66.3% respectively. The χ2Hetero p-value (0.4630) implies the homoscedastic behaviour of the errors and the χ2Serial/Corr p-value (0.5077) also reveals the absence of serial correlation. In addition, χ2Ramsey-Reset p-value (0.2094) reveals that the null hypothesis that the model is correctly specified is accepted. The χ2Hausman statistic and p-value (12.050, p=0.00) indicates that the fixed effects model estimation is the appropriate estimation for the model indicating the existence of significant correlations between firms specific disturbances and the beta’s. The F-stat of 13.41 (p-value = 0.00) which is significant at 5% and suggest that the hypothesis of a significant linear relationship between the dependent and independent variables cannot be rejected. It is also indicative of the joint statistical significance of the model.

The analysis of coefficients reveals that FSIZE\*FLCdecline has a positive effect on CSR (0.0307, p=0.0115) and significant at 5%. This result implies that firm life cycle particualarly the decline stage is a significant moderator of the extent to which the firm size effects CSR. Specifically, the result reveals that decline stage has a positive and significant moderating effect on the relationship between FSIZE and CSR. Thus irrespective of whether the firm large or small

going by the value of its total assets, being in the decline stage improves their CSR practices significantl. FLEV\*FLCdecline has a negative effect on CSR (-0.1535, p=0.1583) though not significant at 5%. This result implies that firm life cycle particularly the decline stage is not a significant moderator of the extent to which the firm leverage effects CSR FAGE\*FLCdecline has a negative effect on CSR (-0.009, p=0.000) and significant at 1%. This result implies that firm life cycle particualarly the decline stage is a significant moderator of the extent to which the firm age effects CSR. Going by the sign of the coefficient, irrespective of the firms age, being in the decline stage reduces their CSR practices. The analysis of coefficients reveals that FIND\*FLCGROWTH has a positive effect on CSR (0.2175, p=0.0002) and significant at 1% and hence irrespective of whether the firm is in an environmently sensitive industry or not, being in the growth stage does significantly improve their CSR practices. The analysis of coefficients reveals that FPROF\*FLCGROWTH has a negative effect on CSR (-0.047, p=0.5757) though not significant at 5%. This result implies that the decline stage is not a significant moderator of the etent to which the firm profitability effects CSR.

# CHAPTER FIVE

**DISCUSSION OF RESULT AND TEST OF HPOTHESES**

# Introduction

In this chapter the discussion of the results is presented which forms the basis for the test of the study hypotheses.

# Discussion of Results

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Baseline Results | Moderating Results | | | |
| Introductory  stage | Growth  Stage | Maturity  Stage | Decline  Stage |
| FIRM SIZE | -0.0227\*\*\* | 0.01113\*\* | -0.0097\*\* | -0.0047 | 0.0307\*\* |
|  | (0.007) | (0.0047) | (0.0043) | (0.0032) | (0.0120) |
|  | {0.0009} | {0.0175} | {0.0248} | {0.1483} | {0.0115} |
| FLEV | -0.0002 | -0.00833\*\* | 0.1370\*\* | 0.01866 | -0.1535 |
|  | (0.0254) | (0.04109) | (0.0696) | (0.0342) | (0.1086) |
|  | {0.9954} | {0.0430} | {0.0496} | {0.2945} | {0.1583} |
| FAGE | -0.00180\*\*\* | 0.00041 | -0.00234\* | -0.0008\* | -0.0092\*\*\* |
|  | (0.0007) | (0.0009) | (0.0013) | (0.0004) | (0.0025) |
|  | {0.0080} | {0.6564} | {0.0721} | {0.0553} | {0.0000} |
| FIND | 0.1070\*\*\* | -0.02379 | 0.0189 | 0.03957\*\*\* | 0.2175\*\*\* |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | (0.0109)  {0.000) | (0.02668)  {0.3729) | (0.0133)  {0.1569) | (0.0136)  {0.0039) | (0.0576)  {0.0002) |
| FPROF | -0.0458\*\*\* | -0.0597 | 0.0469\* | 0.03591 | -0.0364 |
|  | (0.0086) | (0.0366) | (0.0375) | (0.0342) | (0.0650) |
|  | {0.000} | {0.1036} | {0.2118} | {0.2945} | {0.5757} |

Table 4.9. Panel Regression Result Summary

Source: Researcher’s Compilation (2021). ( ) standard errors, { }p-value \*\*\* sig at 1%, \*\* sig at 5% and

* sig at 1%.

# Firm size and corporate social responsibility

From the result summary in table 4.8, the baseline result shows that the analysis of coefficients reveals that FSIZE has a negative effect on CSR (-0.0227, p=0.0009) and significant at 1% and this implies an increase in the firm size results in a decline in CSR . The result implies that larger firms tend to disclose less of CSR and thus the study fails to accept the null hypothesis that firm size has no significant impact on corporate social responsibility in Nigerian listed firms. The finding of the study is in tandem with Naser and Hassan (2013) which measured the extent of corporate social responsibility and it’s determinants by non-financial companies listed on Abu Dhabi Securities Exchange. The findings revealed that the extent of corporate social responsibility is significantl related to corporate size. Using a much larger sample of companies, Kansa, Joshi, and Batra (2014) indicated that corporate size significantl determined the level of corporate social of the companies in India. The study of Akbaş (2014) focused exclusively on non-financial companies though no justification was given for the selection. The result indicated that company size was significantl related to the extent of social .

Furthermore, our findings also corroborate that of Sulaiman, Abdullah, and Fatima (2014), findings which revealed a significant association between firm size and quality of environmental reporting. Nawaiseh, Boa, and El-shohnah (2015) examined the impact of

company size on corporate social responsibility . The regression a result indicated that firm size had a significant impact on corporate social responsibility . Abdulhaq and Muhamed (2015) findings suggested that the extent of corporate social responsibility was influenced by corporate size. Musah (2015) result of the panel regression showed that, quantity of corporate social responsibility and to lesser extent quality of corporate social responsibility is determined by the corporate size. Our findings are also in tandem with Habbash (2016) result which indicated that firm size determined corporate social responsibility . Tan, Benni, and Liani (2016) result revealed that firm size had a significant effect on corporate social responsibility . Bidari (2016) study found that firm size had a significant influence on corporate social responsibility practices. Barbosa (2017) pointed to a significant positive relationship between the extent of corporate- level social and the size of the company. Bani-Khalid, Kouhy, and Hassan (2017) result indicated that firm size is significantly associated with the practices of corporate social and environmental . In Nigeria, Soyinka, Sunday, and Adedeji (2017) analysed the determinants of corporate social responsibility and the result indicated that the relationship between firm size and corporate social responsibility was positive.

However, one finding is in contrast with a number of studies which did not find any significant relationship between the firm size and the corporate social responsibility . For example, Hassan (2009) investigated the relationship between corporate social responsibility and firm size. The study used multiple regression analysis method to analyzed data in the study and the result indicated that corporate size had no significant relationship with corporate social responsibility level. In same vein, Lungu, Caraiani and Dascalu. (2011) examined the relationship between reporting companies’ characteristics and the importance assigned to social

and environmental , using statistical correlations. The results showed that size characteristics measured by assets and revenues cannot be correlated to the extent of corporate social responsibility reports published by companies. The absence of a significant relationship is also observed in the study of Ebiringa, et al. (2013) which examined the effect of firm size on the extent of corporate social responsibility by Oil and Gas firms in Nigeria. The findings showed that an insignificant negative correlation existed between corporate social responsibility and firm size. Same goes for Alkababji (2014) which examined the relationship between corporate social responsibility and the variables which may determine it. In addition, Nawaiseh, Boa, and El-shohnah (2015) result indicated that firm size had no significant influence on corporate social responsibility .

# Firm age and corporate social responsibility

From the result summary in table 4.8, the baseline result shows that FAGE has a negative effect on CSR (-0.0018, p=0.0080) and significant at 1% and this implies that the older the firms gets, the lower the CSR and hence younger firms tend to be characterized with increasing CSR . Therefore, the study fails to accept the null hypothesis that Firm age has a significant effect on corporate social responsibility . The finding is in tandem with Bayoud, Kavanagh, and Slaughter (2012) study’s quantitative findings revealed that there was a significant relationship between company age and the level of corporate social responsibility . Akbaş (2014) investigated the relationship between company characteristics and the extent of the environmental of Turkish companies. The study result indicated that company age was significantly related to the extent of environmental . Our finding also corroborates those of Habbash (2016) which indicated that firm

age is positive determinants of corporate social responsibility . Alhazmi (2017) study found that firm age had a significant influence on corporate social responsibility practices. Elshabasy (2017) found that there was a significant relationship between firm age and environmental information . Welbeck, et al. (2017) indicated that firm age had a significant relationship with firm’s environmental practices.

On the contrary, our finding is in constrast with a number of studies that have also found an insignificant relationship between firm age and corporate social responsibility. For example, Bidari (2016) found that bank age was positively related to the extent of social and environmental , but it was an insignificant predictor to the extent of economic and the overall corporate social responsibility . Al-Ajmi, et al. (2015) study revealed that the majority of the firms somehow disclosed social information and firm age is not significantly influenced corporate social responsibility in the sampled firms in Kuwait stock exchange. Bani-Khalid, et al. (2017) result indicated that firm age is not significant to the practices of corporate social .

# Firm Leverage and corporate social responsibility

From the result summary in table 4.8, the baseline result shows that FLEV has a negative effect on CSR (-0.0002, p=0.0254) and significant at 5% and this implies an increase in the firm leverage results in a decline in CSR and hence highly levered firms can exhibit declining CSR . Therefore, the study fails to accept the null hypothesis that Firm leverage has no significant effect on corporate social responsibility . The outcome is at variance with the agency theory that postulates that firms with a higher level of financial leverage tend to voluntarily engage in CSR reporting in order to satisfy creditors and remove the suspicious of wealth transfer to shareholders. The finding is in tandem with Uwuigbe and Egbide (2012) that firm’s leverage had

a significant negative relationship with the level of corporate social responsibility among selected firms. Similarly, Giannarakis (2013) results based on the multiple regression models indicated that the financial leverage is negatively related with corporate social responsibility . Akbaş (2014) result indicated that company leverage was significantly related to the extent of environmental .

On the contrary, studies that have found an insignificant relationship includes those of Al- Ajmi, et al. (2015) which revealed that firm leverage is not significantly influenced corporate social responsibility in the sampled firms in Kuwait stock exchange Dibia and Onwuchekwa (2015) finding of the study showed that there is no significant relationship between financial leverage and corporate social responsibility . Ohidoa, et al. (2016) result revealed that financial has no significant relationship with environmental . Hu, et al. (2016) result revealed that firm leverage had a negative and insignificant relationship with corporate social responsibility . In addition, our finding is in contrast with Bruns (2017) which found that firm leverage is not significantly determined corporate social responsibility . Elshabasy (2017) found that there was insignificant relationship between firm financial leverage and environmental information . Mohammed (2018) indicated that the relationship between the corporate attribute of firm leverage was insignificant in determining the level corporate social and environmental in listed oil and gas companies in Nigeria. Mia and Al- Mamum (2011) result indicated that corporate social responsibility had no significant associated with leverage.

# Firm profitability and corporate social responsibility

FPROF has a negative effect on CSR (-0.0458, p=0.000) and significant at 1% and this implies that firms that are more profitable appear to disclose less of CSR imformatiom. An

inverse relation between corporate performance and corporate social responsibility practices is in line with the orthodoxy associated with traditional economic thought that depicts this relation as a trade -off between the firms’ profitability and its corporate responsibility (Freedman, 1992). Lungu, et al. (2011) examined the relationship between reporting companies’ characteristics and the importance assigned to social and environmental , using statistical correlations. The result showed that there is a significant negative correlation between change in revenues and return on equity and social for the sampled companies. Uwuigbe and Egbide (2012) investigated the relationship between firms’ corporate financial performance and the level of corporate social responsibility among selected firms in Nigeria and the result revealed that firm’s financial performance have a significant positive relationship with the level of corporate social responsibility among selected firms. Makori and Jagongo (2013) shows that there is significant negative relationship between environmental accounting and return on capital employed. Naser and Hassan (2013) findings revealed that the extent of corporate social responsibility is influenced by corporate profitability. Ebiringa, et al. (2013) findings showed that profitability is significantly positively related to corporate social responsibility of the companies in Nigeria. Giannarakis (2013) implied that increase in firm profitability for the period will lead to increase in corporate social responsibility .

Musah (2015) showed that profitability was significantly related to the quality of corporate social responsibility but not the quantity of corporate social responsibility . Al-Ajmi, et al. (2015) study revealed that the majority of the firms somehow disclosed social information and firm profitability is significantly influenced corporate social responsibility in the sampled firms in Kuwait stock exchange Giannarakis, Konteos, Zafeiriou, and Partalidou (2016) study

suggested that the involvement in socially responsible initiatives has a significant and positive effect on financial performance. Ompusunggu (2016) study indicated that there profitability had a significant effects on the of CSR.

In contrast, a number of studies have found insignificant relationship between profitability and CSR reporting. For example, Sulaiman, et al. (2014) findings revealed that firm profitability had no significant relationship with quality of environmental reporting. Burgwal and Vieira (2014) result provided that firm profitability is not significantly and positively associated with the level of environmental . Echave and Bhati (2010) study found no significant relationship between financial performance and corporate social for Spanish companies. Dibia and Onwuchekwa (2015) finding of the study showed that there is no significant relationship between company profitability and corporate social responsibility . Nawaiseh, Boa, and El- shohnah (2015) result indicated a mixed result between firm profitability and corporate social responsibility . Habbash (2016) result indicated that firm profitability is not among determinants of corporate social responsibility . Umoren, Isiavwe-Ogbari and Morenike (2016) findings revealed that was corporate social responsibility practices were not influenced by firm profitability. El-Moslemany and Etab (2017) results indicated an insignificant relationship between the independent variables (corporate social responsibility toward environment, community, customer, and employee) and the dependent variables corporate financial performance as measured by (ROA, ROE, NPM, and EPS). Bani-Khalid, et al. (2017) result indicated that firm profitability is not significant to the practices of corporate social and environmental .

# Firm industry type and corporate social responsibility

FIND has a positive and significant coefficient (0.1070, p=0.000) at 1% and this implies that the type of industry and particularly environmental sensitive industries tend to significantly improve CSR . Therefore, the study fails to accept the null hypothesis that Firm has no significant effect on corporate social responsibility . The relationship between industry type and corporate social responsibility financial statement has provided a mixed result in both the developed and undeveloped economies. Our findings is in tandem with a number of the studies have examined the relationship and have found the existence of a positive relationship such as Abdulhaq and Muhamed (2015) which examined the extent of corporate social responsibility and its determinants. The findings suggest that the extent of corporate social responsibility is positively influenced by company type of industry. Supporting the presence of positive relationship, Bandara (2016) focused on companies listed on Port Moresby Stock Exchange. In addition, the study covered data through secondary source which involved the sampled companies’ annual reports and accounts published during the three year period of 2011 – 2013. The study further revealed that industry type significantly influenced corporate social responsibility . On the contrar, studies showing evidence of a negative relationship in contrast to those cited above, includes those of Dyduch and Krasodomska (2017). The result provided that industry type had negative and significant relationship with corporate social responsibility financial in Poland. Also in support of a negative relationship, Alkayed (2018) revealed that industry type had a negative significant impact with corporate social responsibility

# Firm life cycle and moderating impact on corporate social responsibility

In this stud, we also argue that the association between CSR and financial distress is moderated by the firms’ life cycle stage. For Firm size, the analysis of coefficients reveals that

FSIZE\*FLCINTRO has a positive effect on CSR (0.0111, p=0.0175) and significant at 1%. This result implies that firm life cycle particualarly the introductory stage is a significant moderator of the etent to which the firm size effects CSR. Thus irrespective of whether the firm large or small going by the value of its total assets, being in the introductory stage enhamces their CSR practices. In the growth stage, FSIZE\*FLCGROWTH has a negative effect on CSR (-0.0097, p=0.0248) and significant at 5% and this similar to the maturity stage where FSIZE\*FLCMATURITy has a negative effect on CSR (-0.0047, p=0.0148) and significant at 5%. Final in the decline stage, FSIZE\*FLCdecline has a positive effect on CSR (0.0307, p=0.0115) and significant at 5%.

FLEV\*FLCINTRO has a negative effect on CSR (-0.0004, p=0.6564) though not significant at 5%. In the growth stage, FLEV\*FLCGROWTH has a positive effect on CSR (0.136670, p=0.049) and significant at 5%. Thus, irrespective of whether the firm is highly, moderately or lowly levered, being in the growth stage improves their CSR practices but in the maturity cycle, FLEV\*FLCMaturity has a positive effect on CSR (0.0187, p=0.295) and insignificant at 5%. Finally, in the decline cycle FLEV\*FLCdecline has a negative effect on CSR (-0.1535, p=0.1583) though not significant at 5%.

For firm age, FAGE\*FLCINTRO has a positive effect on CSR (0.0004, p=0.6564) though not significant at 5% but in the growth stage, FAGE\*FLCGrowth has a negative effect on CSR (- 0.0023, p=0.0721) though not significant at 5%. In the maturity stage, FAGE\*FLCmaturity has a negative effect on CSR (-0.0008, p=0.0553) though not significant at 5%. Finally, in the decline stage, FAGE\*FLCdecline has a negative effect on CSR (-0.009, p=0.000) and significant at 1%.

This result implies that firm life cycle particualarly the decline stage is a significant moderator of the extent to which the firm age effects CSR.

For firm Industry, the analysis of coefficients reveals that FIND\*FLCINTRO has a negative effect on CSR (-0.02379, p=0.3729) though not significant at 5% but in the growth stage, FIND\*FLCGROWTH has a positive effect on CSR (0.2175, p=0.0002) and significant at 1% and hence irrespective of whether the firm is in an environmently sensitive industry or not, being in the growth stage does significantly improve their CSR practice. In the maturity stage, FIND\*FLCmaturity has a positive effect on CSR (0.03957, p=0.0039) and significant at 5%. This result implies that the maturity stage is a significant moderator of the extent to which the firm industry effects CSR.

The analysis of coefficients reveals that FPROF\*FLCINTRO has a negative effect on CSR (-0.0597, p=0.104) though not significant at 5%. FPROF\*FLCGROWTH has a positive effect on CSR (0.047, p=0.2118) though not significant at 5%. FPROF\*FLCmaturity has a positive effect on CSR (0.0359, p=0.295) though not significant at 5%. FPROF\*FLCGROWTH has a negative effect on CSR (-0.047, p=0.5757) though not significant at 5%.

Based on the above results, the study fails to accept the null hypotheses that Firm life cycle has no significant moderating impact on the relationship between firm characteristics and corporate social responsibility of listed firms in Nigeria. Our findings are in tandem with Ahmed, Bikram, Ali, Grantley and Mostafa (2017), Woo and Seung (2018) find that in the growth stage, group-affiliated firms are more engaged in CSR than are unaffiliated firms. Overall, the results indicate that firms have different CSR strategies, depending on their life- cycle stage.Mostafa and Ahsan (2017) results show that size, profitability and slack resources

moderate the association between the corporate life cycle and CSR. These findings are robust when subjected to a series of sensitivity tests. Tifanny and Yu-Chuan (2021) results provide evidence that although CSR and firm value, in general, have a positive relationship, the relationship is contingent on the stages of firm's life cycle. Elsa, Annisaa and Rayna (2021) results showed that there is no evidence to support that at the start-up stage, CSR has a positive effect on financial distress. In the life cycle of the growth and mature stages, CSR has a negative and significant effect on financial distress. There is no evidence to support that at the stage of decline, CSR has a negative effect on financial distress.

# CHAPTER SIX

**SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION**

# Introduction

This chapter eamines the summar of the stud findings, the conclusion and the recommendations

# Summary of findings

1. From the result summary in table 4.8, the baseline result shows that the analysis of coefficients reveals that FSIZE has a negative effect on CSR (-0.0227, p=0.0009) and significant at 1% and this implies an increase in the firm size results in a decline in CSR .
2. From the result summary in table 4.8, the baseline result shows that FAGE has a negative effect on CSR (-0.0018, p=0.0080) and significant at 1% and this implies that the older the firms gets, the lower the CSR and hence younger firms tend to be characterized with increasing CSR .
3. From the result summary in table 4.8, the baseline result shows that FLEV has a negative effect on CSR (-0.0002, p=0.0254) and significant at 5% and this implies an increase in the firm leverage results in a decline in CSR and hence highly levered firms can exhibit declining CSR .
4. Firm profitability has a negative effect on CSR (-0.0458, p=0.000) and significant at 1% and this implies that firms that are more profitable appear to disclose less of CSR imformatiom.
5. Firm industry has a positive and significant coefficient (0.1070, p=0.000) at 1% and this implies that the type of industry and particularly environmental sensitive industries tend to significantly improve CSR .
6. For Firm size, the analysis of coefficients reveals that FSIZE\*FLCINTRO has a positive effect on CSR (0.0111, p=0.0175) and significant at 1%. This result implies that firm life cycle particualarly the introductory stage is a significant moderator of the etent to which the firm size effects CSR. In the growth stage, FSIZE\*FLCGROWTH has a negative effect on CSR (-0.0097, p=0.0248) and significant at 5% and this similar to the maturity stage where FSIZE\*FLCMATURITy has a negative effect on CSR (-0.0047, p=0.0148) and significant at 5%.

Final in the decline stage, FSIZE\*FLCdecline has a positive effect on CSR (0.0307, p=0.0115) and significant at 5%.

1. For firm leverage, FLEV\*FLCINTRO has a negative effect on CSR (-0.0004, p=0.6564) though not significant at 5%. In the growth stage, FLEV\*FLCGROWTH has a positive effect on CSR (0.136670, p=0.049) and significant at 5%. Thus, irrespective of whether the firm is highly, moderately or lowly levered, being in the growth stage improves their CSR practices but in the maturity cycle, FLEV\*FLCMaturity has a positive effect on CSR (0.0187, p=0.295) and insignificant at 5%. Finally, in the decline cycle FLEV\*FLCdecline has a negative effect on CSR (-0.1535, p=0.1583) though not significant at 5%.
2. For firm age, FAGE\*FLCINTRO has a positive effect on CSR (0.0004, p=0.6564) though not significant at 5% but in the growth stage, FAGE\*FLCGrowth has a negative effect on CSR (- 0.0023, p=0.0721) though not significant at 5%. In the maturity stage, FAGE\*FLCmaturity has a negative effect on CSR (-0.0008, p=0.0553) though not significant at 5%. Finally, in the decline stage, FAGE\*FLCdecline has a negative effect on CSR (-0.009, p=0.000) and significant at 1%. This result implies that firm life cycle particualarly the decline stage is a significant moderator of the extent to which the firm age effects CSR.
3. For firm Industry, the analysis of coefficients reveals that FIND\*FLCINTRO has a negative effect on CSR (-0.02379, p=0.3729) though not significant at 5% but in the growth stage, FIND\*FLCGROWTH has a positive effect on CSR (0.2175, p=0.0002) and significant at 1% and hence irrespective of whether the firm is in an environmently sensitive industry or not, being in the growth stage does significantly improve their CSR practice. In the maturity stage, FIND\*FLCmaturity has a positive effect on CSR (0.03957, p=0.0039) and significant at 5%. This

result implies that the maturity stage is a significant moderator of the extent to which the firm industry effects CSR.

# Conclusion

Corporate social responsibility (CSR) have become a key business practice, to the extent that they now report one of the most important reporting issues in global business environments. As a consequence, there have been calls for enhanced reporting on corporate responsibility. As noted earlier, there is an overall dissatisfaction with the mechanism of conventional accounting and its practices, the application of which results in unfavourable broader social consequences Consequently, the established consensus now is that there is an urgent need to expand the business reporting model especially with corporate social responsibility reporting issues in perspective. As a result, the number of companies disclosing their initiatives and performance with respect to social activities has grown.

However, a key recognition that must be brought forward within the push for robust corporate reporting model to incorporate social is the fact that corporate social resposbility is still largely voluntary and unregulated especially in developing economies. CSR has for most part remained voluntary and relied on self-regulation through codes of conduct with the decision to comply with the codes of conduct firmly within the forte of corporations.

The aim of this research is to contribute to the debate on the role of firm charateristics attributes as a driver of CSR in listed firms in Nigeria but adopts an entirely different approach by introducing the moderating effect of firm life cycle. Firms develop over their life cycle, but there has been little research on how firms make strategic decisions over time. This study attempts to identify whether corporate social responsibility (CSR) activities differ by corporate

life-cycle stage. While most CSR studies examine firm-level cross-sectional differences, the current study examines historical evolution by employing life-cycle approach. The findings of the stud reveals that (i) an increase in the firm size results in a decline in CSR . (ii) that the older the firms gets, the lower the CSR and hence younger firms tend to be characterized with increasing CSR (iii) an increase in the firm leverage results in a decline in CSR and hence highly levered firms can exhibit declining CSR . (iv) firms that are more profitable appear to disclose less of CSR imformation. (v) the type of industry and particularly environmental sensitive industries tend to significantly improve CSR . (vi) firm life cycle is a significant moderator of the etent to which the firm attributes affect CSR.

# Recommendation

In the light of the study findings, the following recommendations are suggested

Firstly, the study showed that an increase in the firm size results in a decline in CSR . Hence the study recommends that though CSR is voluntary, there is the need to ensure that firms of all sizes are held accountable for ensuring social responsibility. thus can be inundated is vuluntar should not be allowed to

Secondly, the results reveal that the older the firms gets, the lower the CSR and hence younger firms tend to be characterized with increasing CSR . Though CSR is voluntary institutional pressures can be effective in influencing firms CSR policy. Therefore, the study recommends that that institutional bodies such as the Financial Reporting Council of Nigeria and Securities and Echange commission can entrench CSR practices for older firms that may display tendencies for reduced CSR.

Thirdly, the study reveals that an increase in the firm leverage results in a decline in CSR and hence highly levered firms can exhibit declining CSR . Therefore, the study recommends that highly levered firms can build and sustain creditor confidence by improving their practices with emphasis also on CSR. Hence, it is in the best interest of highly levered firms to dispel the perception of information assmetry that reduced could signal.

Fourthly, the study results show that firms that are more profitable appear to disclose less of CSR imformation. The result recommends that CSR and profit maximization should not occur at an opportunity cost of each other and both can actually occur simultaneously which is now the mainstream philosophy. In other words, companies must be made to understand that it is an obligation to to be social responsible

Fifthly, the study result showed that the type of industry and particularly environmental sensitive industries tend to significantly improve CSR . It is understandable that environmentally sensitive industries may display a strong tendency towards CSR especially eternal CSR but other environmentally non-sensitive firms firms should also be pressured by relevant market institutions to pay attention to CSR.

(vi) The results from the study showed that firm life cycle is a significant moderator of the estent to which the firm attributes affect CSR. Therefore, the study recommends that in understanding the posture of firms toward CSR , the firm life cycle stage of the firm can provide useful insights.

# Contribution to Knowledge

1. The study contributes to the understanding of how Firm size impacts on CSR of non-financial firms in Nigeria and also sheds light on the firm life cycle dynamics of the firm and how this possibly affects behaviour of firms towards CSR.
2. The study revisits the linkage between firm age and CSR especially using the period from firms listing date as the indicator for age. In doing this, the study provides unique and recent evidence of the relationship from a developing country where institutional pressures for CSR are very weak. In addition, the study contributes to knowledge by sheding light on the extent to which firms CSR behaviour modulates throughout the firm life cycle as this aspect remains very misunderstood for developing countries.
3. The study contributes to the literature providing unique and fresh evidence through which the relationship between leverage and CS can be evaluated. In addition, the study contributes to knowledge by sheding light on the extent to which the firm life cycle influences the relationship between firm leverage and CSR.
4. The study contributes to the literature by providing unique and fresh evidence through which the relationship between profitability and CSR can be evaluated. In addition, the study contributes to knowledge by sheding light on the extent to which the firm life cycle influences the relationship between firm profitability and CSR.
5. The study revisits the linkage between firm size and CSR and in doing this, the study provides unique and recent evidence of the relationship from a developing country where institutional pressures for CSR are very weak.
6. In addition, the study contributes to knowledge by sheding light on the extent to which firm life cycle influences the relationship between firm size and CSR.

**APPENDIX**

Dependent Variable: CSR

Method: Panel EGLS (Cross-section random effects) Date: 09/28/21 Time: 14:53

Sample: 2010 2019

Periods included: 10

Cross-sections included: 73

Total panel (unbalanced) observations: 730

Swamy and Arora estimator of component variances

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.632507 | 0.091957 | 6.878281 | 0.0000 |
| FAGE | -0.000962 | 0.000868 | -1.108481 | 0.2680 |
| FLEV | 0.034780 | 0.029247 | 1.189169 | 0.2348 |
| FROE | -0.029798 | 0.024071 | -1.237937 | 0.2162 |
| FSIZE | 0.000301 | 0.012770 | 0.023551 | 0.9812 |
| IND | 0.032008 | 0.026947 | 1.187799 | 0.2353 |

Effects Specification

S.D. Rho

Cross-section random 0.100470 0.3531

Idiosyncratic random 0.135997 0.6469

Weighted Statistics

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.006307 | Mean dependent var | 0.253005 |
| Adjusted R-squared | -0.000760 | S.D. dependent var | 0.136193 |
| S.E. of regression | 0.135866 | Sum squared resid | 12.97712 |
| F-statistic | 0.892426 | Durbin-Watson stat | 1.138869 |
| Prob(F-statistic) | 0.485589 |  |  |
|  | Unweighted | Statistics |  |
| R-squared | 0.005445 | Mean dependent var | 0.638491 |
| Sum squared resid | 19.78993 | Durbin-Watson stat | 0.746806 |

Dependent Variable: CSR

Method: Panel EGLS (Cross-section weights) Date: 09/28/21 Time: 14:57

Sample: 2010 2019

Periods included: 10

Cross-sections included: 73

Total panel (unbalanced) observations: 730 Iterate coefficients after one-step weighting matrix

White cross-section standard errors & covariance (d.f. corrected) Convergence achieved after 11 total coef iterations

WARNING: estimated coefficient covariance matrix is of reduced rank

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.795499 | 0.064382 | 12.35583 | 0.0000 |
| FAGE | -0.001804 | 0.000677 | -2.666804 | 0.0080 |
| FLEV | -0.000146 | 0.025426 | -0.005756 | 0.9954 |
| FROE | -0.045763 | 0.008619 | -5.309757 | 0.0000 |
| FSIZE | -0.022706 | 0.006775 | -3.351694 | 0.0009 |
| IND | 0.107031 | 0.010895 | 9.824122 | 0.0000 |
| AR(3) | -0.037316 | 0.028175 | -1.324435 | 0.1861 |

Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.740269 | Mean dependent var | 1.006790 |
| Adjusted R-squared | 0.691371 | S.D. dependent var | 0.750911 |
| S.E. of regression | 0.132737 | Sum squared resid | 7.206243 |
| F-statistic | 15.13902 | Durbin-Watson stat | 1.591711 |
| Prob(F-statistic) | 0.000000 |  |  |
| Unweighted Statistics | | | |
| R-squared | 0.491435 | Mean dependent var | 0.638214 |
| Sum squared resid | 7.318020 | Durbin-Watson stat | 1.508345 |

Inverted AR Roots .17+.29i .17-.29i -.33

|  |  |  |  |
| --- | --- | --- | --- |
| Correlated Random Effects - Hausman Tes Equation: Untitled  Test cross-section random effects | t |  | |
| Test Summary | Chi-Sq. Statistic | Chi-Sq. d.f. | Prob. |
| Cross-section random | 13.906399 | 5 | 0.000 |

Cross-section random effects test comparisons:

Variable Fixed Random Var(Diff.) Prob.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| FAGE | -0.001943 | -0.000936 | 0.000001 | 0.2344 |
| FLEV | 0.019983 | 0.035414 | 0.000152 | 0.2103 |
| FROE | -0.040422 | -0.029387 | 0.000115 | 0.3027 |
| FSIZE | 0.003852 | 0.000217 | 0.000142 | 0.7603 |
| IND | 0.065813 | 0.031385 | 0.001643 | 0.3957 |

Cross-section random effects test equation: Dependent Variable: CSR

Method: Panel Least Squares Date: 09/28/21 Time: 15:02 Sample: 2010 2019

Periods included: 10

Cross-sections included: 72

Total panel (unbalanced) observations: 709

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.622064 | 0.122688 | 5.070289 | 0.0000 |
| FAGE | -0.001943 | 0.001205 | -1.612272 | 0.1074 |
| FLEV | 0.019983 | 0.031639 | 0.631587 | 0.5279 |
| FROE | -0.040422 | 0.026253 | -1.539681 | 0.1241 |
| FSIZE | 0.003852 | 0.017357 | 0.221919 | 0.8244 |
| IND | 0.065813 | 0.048425 | 1.359076 | 0.1746 |

Effects Specification

Cross-section fixed (dummy variables)

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.412563 | Mean dependent var | 0.638491 |
| Adjusted R-squared | 0.341922 | S.D. dependent var | 0.167645 |
| S.E. of regression | 0.135997 | Akaike info criterion | -1.050124 |
| Sum squared resid | 11.68899 | Schwarz criterion | -0.554472 |
| Log likelihood | 449.2689 | Hannan-Quinn criter. | -0.858639 |
| F-statistic | 5.840263 | Durbin-Watson stat | 1.261385 |
| Prob(F-statistic) | 0.000000 |  |  |

Dependent Variable: CSR

Method: Panel EGLS (Cross-section weights) Date: 09/28/21 Time: 15:12

Sample: 2010 2019

Periods included: 10

Cross-sections included: 73

Total panel (unbalanced) observations: 730 Iterate coefficients after one-step weighting matrix

Cross-section SUR (PCSE) standard errors & covariance (d.f. corrected) Convergence achieved after 10 total coef iterations

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.656244 | 0.015919 | 41.22308 | 0.0000 |
| FAGE | -0.000419 | 0.000599 | -0.699037 | 0.4849 |
| FAGE\*INTRO | -0.000657 | 0.000364 | -1.804989 | 0.0717 |
| FAGE\*GROW | -0.000337 | 0.000524 | -0.643964 | 0.5199 |
| FAGE\*MAT | -0.000165 | 0.000385 | -0.426975 | 0.6696 |
| FAGE\*DEC | -0.000181 | 0.000540 | -0.336170 | 0.7369 |
| AR(2) | 0.006026 | 0.059067 | 0.102019 | 0.9188 |

Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.709500 | Mean dependent var | 0.965249 |
| Adjusted R-squared | 0.664035 | S.D. dependent var | 0.646027 |
| S.E. of regression | 0.132800 | Sum squared resid | 8.676777 |
| F-statistic | 15.60560 | Durbin-Watson stat | 1.520139 |
| Prob(F-statistic) | 0.000000 |  |  |
| Unweighted Statistics | | | |
| R-squared | 0.468907 | Mean dependent var | 0.640526 |
| Sum squared resid | 8.731302 | Durbin-Watson stat | 1.432977 |

Inverted AR Roots .08 -.08

Dependent Variable: CSR

Method: Panel EGLS (Cross-section random effects) Date: 09/28/21 Time: 15:13

Sample: 2010 2019

Periods included: 10

Cross-sections included: 73

Total panel (unbalanced) observations: 730

Swamy and Arora estimator of component variances

Cross-section SUR (PCSE) standard errors & covariance (d.f. corrected)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.640020 | 0.022518 | 28.42234 | 0.0000 |
| FAGE | -8.92E-05 | 0.000747 | -0.119541 | 0.9049 |
| FAGE\*INTRO | 0.000248 | 0.000936 | 0.264413 | 0.7915 |
| FAGE\*GROW | -9.10E-05 | 0.000726 | -0.125329 | 0.9003 |
| FAGE\*MAT | 1.12E-05 | 0.000567 | 0.019694 | 0.9843 |
| FAGE\*DEC | 0.000353 | 0.000828 | 0.426755 | 0.6697 |

Effects Specification

S.D. Rho

Cross-section random 0.097369 0.3364

Idiosyncratic random 0.136756 0.6636

Weighted Statistics

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.000372 | Mean dependent var | 0.259454 |
| Adjusted R-squared | -0.006648 | S.D. dependent var | 0.136344 |
| S.E. of regression | 0.136765 | Sum squared resid | 13.31764 |
| F-statistic | 0.052980 | Durbin-Watson stat | 1.127492 |
| Prob(F-statistic) | 0.998244 |  |  |
|  | Unweighted | Statistics |  |
| R-squared | 0.001450 | Mean dependent var | 0.638454 |

Sum squared resid 20.02790 Durbin-Watson stat 0.749730

|  |  |  |  |
| --- | --- | --- | --- |
| Correlated Random Effects - Hausman Tes Equation: Untitled  Test cross-section random effects | t |  | |
| Test Summary | Chi-Sq. Statistic | Chi-Sq. d.f. | Prob. |
| Cross-section random | 14.877664 | 5 | 0.000 |

Cross-section random effects test comparisons:

Variable Fixed Random Var(Diff.) Prob.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| FAGE | -0.000538 | -0.000093 | 0.000000 | 0.5153 |
| FAGE\*INTRO | 0.000088 | 0.000245 | 0.000000 | 0.2143 |
| FAGE\*GROW | 0.000012 | -0.000089 | 0.000000 | 0.5071 |
| FAGE\*MAT | 0.000081 | 0.000012 | 0.000000 | 0.6116 |
| FAGE\*DEC | 0.000286 | 0.000353 | 0.000000 | 0.6877 |

Cross-section random effects test equation: Dependent Variable: CSR

Method: Panel Least Squares Date: 09/28/21 Time: 15:17 Sample: 2010 2019

Periods included: 10

Cross-sections included: 72

Total panel (unbalanced) observations: 718

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.650142 | 0.025684 | 25.31282 | 0.0000 |
| FAGE | -0.000538 | 0.001063 | -0.505856 | 0.6131 |
| FAGE\*INTRO | 8.77E-05 | 0.000831 | 0.105516 | 0.9160 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| FAGE\*GROW | 1.17E-05 | 0.000742 | 0.015780 | 0.9874 |
| FAGE\*MAT | 8.08E-05 | 0.000550 | 0.146944 | 0.8832 |
| FAGE\*DEC | 0.000286 | 0.001049 | 0.272921 | 0.7850 |

Effects Specification

Cross-section fixed (dummy variables)

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.402301 | Mean dependent var | 0.638454 |
| Adjusted R-squared | 0.331435 | S.D. dependent var | 0.167253 |
| S.E. of regression | 0.136756 | Akaike info criterion | -1.040198 |
| Sum squared resid | 11.98804 | Schwarz criterion | -0.549407 |
| Log likelihood | 450.4312 | Hannan-Quinn criter. | -0.850701 |
| F-statistic | 5.676921 | Durbin-Watson stat | 1.251499 |
| Prob(F-statistic) | 0.000000 |  |  |

Dependent Variable: CSR

Method: Panel EGLS (Cross-section weights) Date: 09/28/21 Time: 15:21

Sample: 2010 2019

Periods included: 10

Cross-sections included: 73

Total panel (unbalanced) observations: 730 Iterate coefficients after one-step weighting matrix

Cross-section weights (PCSE) standard errors & covariance (d.f. corrected) Convergence achieved after 10 total coef iterations

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.637931 | 0.006319 | 100.9557 | 0.0000 |
| FLEV\*INTRO | -0.032273 | 0.014735 | -2.190179 | 0.0290 |
| FLEV\*GROW | 0.014835 | 0.019723 | 0.752152 | 0.4523 |
| FLEV\*MAT | 0.009894 | 0.012684 | 0.780090 | 0.4357 |
| FLEV\*DEC | -0.022435 | 0.029696 | -0.755496 | 0.4503 |
| AR(2) | 0.012911 | 0.022445 | 0.575210 | 0.5654 |

Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.713771 | Mean dependent var | 1.009053 |
| Adjusted R-squared | 0.669467 | S.D. dependent var | 0.796831 |
| S.E. of regression | 0.132322 | Sum squared resid | 8.596916 |
| F-statistic | 16.11069 | Durbin-Watson stat | 1.549859 |
| Prob(F-statistic) | 0.000000 |  |  |

Unweighted Statistics

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.469097 | Mean dependent var | 0.639859 |
| Sum squared resid | 8.689920 | Durbin-Watson stat | 1.447748 |

Inverted AR Roots .11 -.11

|  |  |  |  |
| --- | --- | --- | --- |
| Correlated Random Effects - Hausman Tes Equation: Untitled  Test cross-section random effects | t |  | |
| Test Summary | Chi-Sq. Statistic | Chi-Sq. d.f. | Prob. |
| Cross-section random | 15.445853 | 4 | 0.000 |

Cross-section random effects test comparisons:

Variable Fixed Random Var(Diff.) Prob.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| FLEV\*INTRO | -0.001405 | 0.007489 | 0.000037 | 0.1411 |
| FLEV\*GROW | 0.044048 | 0.042005 | 0.000042 | 0.7525 |
| FLEV\*MAT | 0.013402 | 0.013446 | 0.000032 | 0.9937 |
| FLEV\*DEC | 0.001126 | 0.004405 | 0.000050 | 0.6431 |

Cross-section random effects test equation: Dependent Variable: CSR

Method: Panel Least Squares Date: 09/28/21 Time: 15:22 Sample: 2010 2019

Periods included: 10

Cross-sections included: 72

Total panel (unbalanced) observations: 717

Variable Coefficient Std. Error t-Statistic Prob.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| C | 0.629805 | 0.011262 | 55.92303 | 0.0000 |
| FLEV\*INTRO | -0.001405 | 0.030538 | -0.046015 | 0.9633 |
| FLEV\*GROW | 0.044048 | 0.027820 | 1.583309 | 0.1138 |
| FLEV\*MAT | 0.013402 | 0.022575 | 0.593652 | 0.5530 |
| FLEV\*DEC | 0.001126 | 0.042020 | 0.026793 | 0.9786 |

Effects Specification

Cross-section fixed (dummy variables)

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.403995 | Mean dependent var | 0.638187 |
| Adjusted R-squared | 0.334259 | S.D. dependent var | 0.167216 |
| S.E. of regression | 0.136437 | Akaike info criterion | -1.045966 |
| Sum squared resid | 11.93217 | Schwarz criterion | -0.561021 |
| Log likelihood | 450.9788 | Hannan-Quinn criter. | -0.858714 |
| F-statistic | 5.793250 | Durbin-Watson stat | 1.264333 |
| Prob(F-statistic) | 0.000000 |  |  |

Dependent Variable: CSR

Method: Panel EGLS (Cross-section random effects) Date: 09/28/21 Time: 15:23

Sample: 2010 2019

Periods included: 10

Cross-sections included: 73

Total panel (unbalanced) observations: 730

Swamy and Arora estimator of component variances

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.629566 | 0.015807 | 39.82836 | 0.0000 |
| FLEV\*INTRO | 0.007489 | 0.029934 | 0.250198 | 0.8025 |
| FLEV\*GROW | 0.042005 | 0.027055 | 1.552571 | 0.1210 |
| FLEV\*MAT | 0.013446 | 0.021865 | 0.614961 | 0.5388 |
| FLEV\*DEC | 0.004405 | 0.041420 | 0.106347 | 0.9153 |

Effects Specification

S.D. Rho

Cross-section random 0.096588 0.3339

Idiosyncratic random 0.136437 0.6661

Weighted Statistics

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.003551 | Mean dependent var | 0.260757 |
| Adjusted R-squared | -0.002047 | S.D. dependent var | 0.136511 |
| S.E. of regression | 0.136563 | Sum squared resid | 13.27846 |
| F-statistic | 0.634415 | Durbin-Watson stat | 1.134964 |

Prob(F-statistic) 0.638076

Unweighted Statistics

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.000954 | Mean dependent var | 0.638187 |
| Sum squared resid | 20.00115 | Durbin-Watson stat | 0.753486 |

Dependent Variable: CSR

Method: Panel EGLS (Cross-section weights) Date: 09/28/21 Time: 15:27

Sample: 2010 2019

Periods included: 10

Cross-sections included: 73

Total panel (unbalanced) observations: 730 Iterate coefficients after one-step weighting matrix

White cross-section standard errors & covariance (d.f. corrected) Convergence achieved after 11 total coef iterations

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.642848 | 0.006700 | 95.94464 | 0.0000 |
| FROE\*INTRO | -0.053011 | 0.018530 | -2.860742 | 0.0044 |
| FROE\*GROW | 0.002192 | 0.020835 | 0.105187 | 0.9163 |
| FROE\*MAT | -0.003041 | 0.012625 | -0.240912 | 0.8097 |
| FROE\*DEC | -0.026724 | 0.010742 | -2.487785 | 0.0132 |
| AR(3) | -0.046960 | 0.028210 | -1.664676 | 0.0967 |

Effects Specification

Cross-section fixed (dummy variables)

|  |  |  |
| --- | --- | --- |
|  | Weighted Statistics |  |
| R-squared | 0.712865 Mean dependent var | 0.962337 |
| Adjusted R-squared | 0.659899 S.D. dependent var | 0.592111 |

|  |  |  |
| --- | --- | --- |
| S.E. of regression | 0.133609 Sum squared resid | 7.354756 |
| F-statistic Prob(F-statistic) | 13.45878 Durbin-Watson stat  0.000000 | 1.621710 |
|  | Unweighted Statistics |  |

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.489193 | Mean dependent var | 0.638998 |
| Sum squared resid | 7.387707 | Durbin-Watson stat | 1.514231 |

Inverted AR Roots .18+.31i .18-.31i -.36

Dependent Variable: CSR

Method: Panel EGLS (Cross-section random effects) Date: 09/28/21 Time: 15:28

Sample: 2010 2019

Periods included: 10

Cross-sections included: 73

Total panel (unbalanced) observations: 730

Swamy and Arora estimator of component variances

White cross-section standard errors & covariance (d.f. corrected)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.647540 | 0.018989 | 34.10160 | 0.0000 |
| FROE\*INTRO | -0.038127 | 0.028425 | -1.341329 | 0.1802 |
| FROE\*GROW | 0.006311 | 0.020707 | 0.304792 | 0.7606 |
| FROE\*MAT | -0.028227 | 0.016749 | -1.685306 | 0.0924 |
| FROE\*DEC | 0.030915 | 0.054028 | 0.572199 | 0.5674 |

Effects Specification

S.D. Rho

Cross-section random 0.099283 0.3478

Idiosyncratic random 0.135942 0.6522

Weighted Statistics

|  |  |  |
| --- | --- | --- |
|  | Unweighted Statistics |  |
| R-squared | 0.003324 Mean dependent var | 0.638761 |
| Sum squared resid | 19.86864 Durbin-Watson stat | 0.752202 |

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.005890 | Mean dependent var | 0.255397 |
| Adjusted R-squared | 0.000249 | S.D. dependent var | 0.136226 |
| S.E. of regression | 0.135879 | Sum squared resid | 13.01646 |
| F-statistic | 1.044219 | Durbin-Watson stat | 1.148179 |
| Prob(F-statistic) | 0.383429 |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Correlated Random Effects - Hausman Test Equation: Untitled  Test cross-section random effects |  | | |
| Test Summary | Chi-Sq. Statistic | Chi-Sq. d.f. | Prob. |
| Cross-section random | 9.192646 | 4 | 0.0261 |

Cross-section random effects test comparisons:

Variable Fixed Random Var(Diff.) Prob.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| FROE\*INTRO | -0.046537 | -0.038154 | 0.000047 | 0.2191 |
| FROE\*GROW | 0.006548 | 0.006312 | 0.000059 | 0.9754 |
| FROE\*MAT | -0.026221 | -0.028221 | 0.000051 | 0.7787 |
| FROE\*DEC | 0.028363 | 0.030907 | 0.000116 | 0.8133 |

Cross-section random effects test equation: Dependent Variable: CSR

Method: Panel Least Squares Date: 09/28/21 Time: 15:31

Sample: 2010 2019

Periods included: 10

Cross-sections included: 72

Total panel (unbalanced) observations: 710

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.646686 | 0.009906 | 65.28285 | 0.0000 |
| FROE\*INTRO | -0.046537 | 0.031741 | -1.466140 | 0.1431 |
| FROE\*GROW | 0.006548 | 0.027751 | 0.235960 | 0.8135 |
| FROE\*MAT | -0.026221 | 0.023099 | -1.135148 | 0.2567 |
| FROE\*DEC | 0.028363 | 0.060645 | 0.467687 | 0.6402 |

Effects Specification

Cross-section fixed (dummy variables)

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.412261 | Mean dependent var | 0.638761 |
| Adjusted R-squared | 0.342734 | S.D. dependent var | 0.167681 |
| S.E. of regression | 0.135942 | Akaike info criterion | -1.052304 |
| Sum squared resid | 11.71652 | Schwarz criterion | -0.563628 |
| Log likelihood | 449.5679 | Hannan-Quinn criter. | -0.863526 |
| F-statistic | 5.929477 | Durbin-Watson stat | 1.276270 |
| Prob(F-statistic) | 0.000000 |  |  |

Dependent Variable: CSR

Method: Panel EGLS (Cross-section weights) Date: 09/28/21 Time: 15:36

Sample: 2010 2019

Periods included: 10

Cross-sections included: 73

Total panel (unbalanced) observations: 730 Iterate coefficients after one-step weighting matrix

White cross-section standard errors & covariance (d.f. corrected) Convergence achieved after 11 total coef iterations

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.643361 | 0.007515 | 85.60851 | 0.0000 |
| FSIZE\*INTRO | -0.002433 | 0.003091 | -0.787134 | 0.4316 |
| FSIZE\*GROW | 0.000260 | 0.002669 | 0.097494 | 0.9224 |
| FSIZE\*MAT | -0.000395 | 0.001567 | -0.252115 | 0.8011 |
| FSIZE\*DEC | -0.000956 | 0.002321 | -0.412025 | 0.6805 |
| AR(3) | -0.049614 | 0.027954 | -1.774845 | 0.0767 |

Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.706274 | Mean dependent var | 0.975591 |
| Adjusted R-squared | 0.652870 | S.D. dependent var | 0.634768 |
| S.E. of regression | 0.133995 | Sum squared resid | 7.505084 |
| F-statistic | 13.22496 | Durbin-Watson stat | 1.567586 |
| Prob(F-statistic) | 0.000000 |  |  |
| Unweighted Statistics | | | |
| R-squared | 0.481502 | Mean dependent var | 0.640141 |
| Sum squared resid | 7.549688 | Durbin-Watson stat | 1.478919 |

Inverted AR Roots .18-.32i .18+.32i -.37

Dependent Variable: CSR

Method: Panel EGLS (Cross-section random effects) Date: 09/28/21 Time: 15:38

Sample: 2010 2019

Periods included: 10

Cross-sections included: 73

Total panel (unbalanced) observations: 730

Wallace and Hussain estimator of component variances

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.639615 | 0.017546 | 36.45310 | 0.0000 |
| FSIZE\*INTRO | -0.000614 | 0.003225 | -0.190486 | 0.8490 |
| FSIZE\*GROW | 0.000835 | 0.002741 | 0.304745 | 0.7606 |
| FSIZE\*MAT | -0.000679 | 0.002220 | -0.305772 | 0.7599 |
| FSIZE\*DEC | 0.002563 | 0.004099 | 0.625321 | 0.5320 |

Effects Specification

S.D. Rho

Cross-section random 0.097546 0.3376

Idiosyncratic random 0.136631 0.6624

Weighted Statistics

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.001463 | Mean dependent var | 0.258925 |
| Adjusted R-squared | -0.004147 | S.D. dependent var | 0.136414 |
| S.E. of regression | 0.136610 | Sum squared resid | 13.28757 |
| F-statistic | 0.260804 | Durbin-Watson stat | 1.132496 |
| Prob(F-statistic) | 0.903066 |  |  |
|  | Unweighted | Statistics |  |
| R-squared | 0.000900 | Mean dependent var | 0.638187 |
| Sum squared resid | 20.00222 | Durbin-Watson stat | 0.752323 |

Dependent Variable: CSR

Method: Panel EGLS (Cross-section weights) Date: 09/28/21 Time: 20:03

Sample: 2010 2019

Periods included: 10

Cross-sections included: 73

Total panel (unbalanced) observations: 730 Iterate coefficients after one-step weighting matrix

Convergence achieved after 10 total coef iterations

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.639935 | 0.003285 | 194.8151 | 0.0000 |
| FROE\*INTRO | -0.059754 | 0.036644 | -1.630636 | 0.1036 |
| FLEV\*INTRO | -0.083367 | 0.041092 | -2.028795 | 0.0430 |
| FAGE\*INTRO | 0.000412 | 0.000926 | 0.445110 | 0.6564 |
| IND\*INTRO | -0.023790 | 0.026677 | -0.891794 | 0.3729 |
| FSIZE\*INTRO | 0.011133 | 0.004669 | 2.384306 | 0.0175 |
| AR(2) | 0.021689 | 0.023808 | 0.910974 | 0.3628 |

Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.728408 | Mean dependent var | 1.001341 |
| Adjusted R-squared | 0.685021 | S.D. dependent var | 0.786351 |
| S.E. of regression | 0.131773 | Sum squared resid | 8.369483 |
| F-statistic | 16.78858 | Durbin-Watson stat | 1.564308 |
| Prob(F-statistic) | 0.000000 |  |  |
| Unweighted Statistics | | | |
| R-squared | 0.473508 | Mean dependent var | 0.638179 |
| Sum squared resid | 8.527460 | Durbin-Watson stat | 1.470942 |

Inverted AR Roots .15 -.15

Dependent Variable: CSR

Method: Panel EGLS (Cross-section random effects) Date: 09/28/21 Time: 20:29

Sample: 2010 2019

Periods included: 10

Cross-sections included: 73

Total panel (unbalanced) observations: 730

Swamy and Arora estimator of component variances

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.639463 | 0.012608 | 50.71894 | 0.0000 |
| FROE\*INTRO | -0.087970 | 0.054410 | -1.616795 | 0.1064 |
| FLEV\*INTRO | 0.029307 | 0.088729 | 0.330294 | 0.7413 |
| FAGE\*INTRO | 0.000666 | 0.001596 | 0.417407 | 0.6765 |
| IND\*INTRO | -0.039280 | 0.044489 | -0.882904 | 0.3776 |
| FSIZE\*INTRO | 0.005349 | 0.009381 | 0.570242 | 0.5687 |

Effects Specification

S.D. Rho

Cross-section random 0.096764 0.3356

Idiosyncratic random 0.136160 0.6644

Weighted Statistics

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.005790 | Mean dependent var | 0.261359 |
| Adjusted R-squared | -0.001281 | S.D. dependent var | 0.136653 |
| S.E. of regression | 0.136344 | Sum squared resid | 13.06855 |
| F-statistic | 0.818874 | Durbin-Watson stat | 1.134994 |
| Prob(F-statistic) | 0.536363 |  |  |
|  | Unweighted | Statistics |  |
| R-squared | 0.004959 | Mean dependent var | 0.638491 |
| Sum squared resid | 19.79961 | Durbin-Watson stat | 0.749143 |

|  |  |  |  |
| --- | --- | --- | --- |
| Correlated Random Effects - Hausman Tes Equation: Untitled  Test cross-section random effects | t |  | |
| Test Summary | Chi-Sq. Statistic | Chi-Sq. d.f. | Prob. |
| Cross-section random | 17.061385 | 5 | 0000 |

Cross-section random effects test comparisons:

Variable Fixed Random Var(Diff.) Prob.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| FROE\*INTRO | -0.092022 | -0.088084 | 0.000078 | 0.6564 |
| FLEV\*INTRO | 0.028511 | 0.029284 | 0.000159 | 0.9512 |
| FAGE\*INTRO | 0.000544 | 0.000663 | 0.000000 | 0.7319 |
| IND\*INTRO | -0.030634 | -0.039038 | 0.000096 | 0.3904 |

FSIZE\*INTRO 0.004282 0.005319 0.000002 0.5002

Cross-section random effects test equation: Dependent Variable: CSR

Method: Panel Least Squares Date: 09/28/21 Time: 20:31 Sample: 2010 2019

Periods included: 10

Cross-sections included: 73

Total panel (unbalanced) observations: 730

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.639205 | 0.005378 | 118.8654 | 0.0000 |
| FROE\*INTRO | -0.092022 | 0.055146 | -1.668692 | 0.0957 |
| FLEV\*INTRO | 0.028511 | 0.089648 | 0.318034 | 0.7506 |
| FAGE\*INTRO | 0.000544 | 0.001634 | 0.332932 | 0.7393 |
| IND\*INTRO | -0.030634 | 0.045582 | -0.672050 | 0.5018 |
| FSIZE\*INTRO | 0.004282 | 0.009510 | 0.450253 | 0.6527 |

Effects Specification

Cross-section fixed (dummy variables)

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.411159 | Mean dependent var | 0.638491 |
| Adjusted R-squared | 0.340349 | S.D. dependent var | 0.167645 |
| S.E. of regression | 0.136160 | Akaike info criterion | -1.047736 |
| Sum squared resid | 11.71693 | Schwarz criterion | -0.552085 |
| Log likelihood | 448.4226 | Hannan-Quinn criter. | -0.856251 |
| F-statistic | 5.806509 | Durbin-Watson stat | 1.266539 |
| Prob(F-statistic) | 0.000000 |  |  |

Dependent Variable: CSR

Method: Panel EGLS (Cross-section weights) Date: 09/28/21 Time: 20:34

Sample: 2010 2019

Periods included: 10

Cross-sections included: 73

Total panel (unbalanced) observations: 730 Iterate coefficients after one-step weighting matrix

White cross-section standard errors & covariance (d.f. corrected) Convergence achieved after 12 total coef iterations

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.638024 | 0.005498 | 116.0422 | 0.0000 |
| FROE\*GROW | 0.046907 | 0.037517 | 1.250281 | 0.2118 |
| FLEV\*GROW | 0.137022 | 0.069605 | 1.968571 | 0.0496 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| FAGE\*GROW | -0.002336 | 0.001296 | -1.802273 | 0.0721 |
| IND\*GROW | 0.018887 | 0.013321 | 1.417830 | 0.1569 |
| FSIZE\*GROW | -0.009738 | 0.004326 | -2.250953 | 0.0248 |
| AR(2) | 0.013801 | 0.031780 | 0.434254 | 0.6643 |

Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.705549 | Mean dependent var | 0.965311 |
| Adjusted R-squared | 0.658510 | S.D. dependent var | 0.736864 |
| S.E. of regression | 0.130313 | Sum squared resid | 8.185080 |
| F-statistic | 14.99927 | Durbin-Watson stat | 1.568526 |
| Prob(F-statistic) | 0.000000 |  |  |
| Unweighted Statistics | | | |
| R-squared | 0.482434 | Mean dependent var | 0.638179 |
| Sum squared resid | 8.382886 | Durbin-Watson stat | 1.486241 |

Inverted AR Roots .12 -.12

|  |  |  |  |
| --- | --- | --- | --- |
| Correlated Random Effects - Hausman Tes Equation: Untitled  Test cross-section random effects | t |  | |
| Test Summary | Chi-Sq. Statistic | Chi-Sq. d.f. | Prob. |
| Cross-section random | 11.889070 | 5 | 0.0003 |

Cross-section random effects test comparisons:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Fixed | Random | Var(Diff.) | Prob. |
| FROE\*GROW | 0.023326 | 0.032500 | 0.000101 | 0.3623 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| FLEV\*GROW | 0.165143 | 0.165582 | 0.000156 | 0.9720 |
| FAGE\*GROW | -0.002746 | -0.002552 | 0.000000 | 0.5276 |
| IND\*GROW | 0.032298 | 0.026889 | 0.000073 | 0.5255 |
| FSIZE\*GROW | -0.009560 | -0.010703 | 0.000002 | 0.4693 |

Cross-section random effects test equation: Dependent Variable: CSR

Method: Panel Least Squares Date: 09/28/21 Time: 20:37 Sample: 2010 2019

Periods included: 10

Cross-sections included: 72

Total panel (unbalanced) observations: 709

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.636889 | 0.005636 | 113.0030 | 0.0000 |
| FROE\*GROW | 0.023326 | 0.051007 | 0.457312 | 0.6476 |
| FLEV\*GROW | 0.165143 | 0.065433 | 2.523866 | 0.0119 |
| FAGE\*GROW | -0.002746 | 0.001362 | -2.015637 | 0.0443 |
| IND\*GROW | 0.032298 | 0.036455 | 0.885960 | 0.3760 |
| FSIZE\*GROW | -0.009560 | 0.007788 | -1.227586 | 0.2201 |

Effects Specification

Cross-section fixed (dummy variables)

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.417095 | Mean dependent var | 0.638491 |
| Adjusted R-squared | 0.346999 | S.D. dependent var | 0.167645 |
| S.E. of regression | 0.135472 | Akaike info criterion | -1.057868 |
| Sum squared resid | 11.59881 | Schwarz criterion | -0.562217 |
| Log likelihood | 452.0143 | Hannan-Quinn criter. | -0.866383 |
| F-statistic | 5.950319 | Durbin-Watson stat | 1.279763 |
| Prob(F-statistic) | 0.000000 |  |  |

Dependent Variable: CSR

Method: Panel EGLS (Cross-section weights) Date: 09/28/21 Time: 20:40

Sample: 2010 2019

Periods included: 10

Cross-sections included: 73

Total panel (unbalanced) observations: 730 Iterate coefficients after one-step weighting matrix

White cross-section standard errors & covariance (d.f. corrected) Convergence achieved after 13 total coef iterations

WARNING: estimated coefficient covariance matrix is of reduced rank

Variable Coefficient Std. Error t-Statistic Prob.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| C | 0.637899 | 0.007553 | 84.46095 | 0.0000 |
| FROE\*MAT | 0.035909 | 0.034213 | 1.049564 | 0.2945 |
| FLEV\*MAT | 0.018655 | 0.033058 | 0.564306 | 0.5729 |
| FAGE\*MAT | -0.000797 | 0.000415 | -1.922075 | 0.0553 |
| IND\*MAT | 0.039570 | 0.013643 | 2.900273 | 0.0039 |
| FSIZE\*MAT | -0.004681 | 0.003232 | -1.448163 | 0.1483 |
| AR(3) | -0.049076 | 0.029007 | -1.691863 | 0.0914 |

Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.714460 | Mean dependent var | 0.976851 |
| Adjusted R-squared | 0.660703 | S.D. dependent var | 0.635414 |
| S.E. of regression | 0.133426 | Sum squared resid | 7.281257 |
| F-statistic | 13.29059 | Durbin-Watson stat | 1.597651 |
| Prob(F-statistic) | 0.000000 |  |  |
| Unweighted Statistics | | | |
| R-squared | 0.484339 | Mean dependent var | 0.638214 |
| Sum squared resid | 7.420123 | Durbin-Watson stat | 1.487740 |

Inverted AR Roots .18+.32i .18-.32i -.37

Dependent Variable: CSR

Method: Panel EGLS (Cross-section random effects) Date: 09/28/21 Time: 20:41

Sample: 2010 2019

Periods included: 10

Cross-sections included: 72

Total panel (unbalanced) observations: 709

Swamy and Arora estimator of component variances

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.644806 | 0.014282 | 45.14715 | 0.0000 |
| FROE\*MAT | -0.038921 | 0.029364 | -1.325463 | 0.1854 |
| FLEV\*MAT | 0.052733 | 0.044089 | 1.196063 | 0.2321 |
| FAGE\*MAT | 0.000275 | 0.000903 | 0.304339 | 0.7610 |
| IND\*MAT | 0.025270 | 0.026299 | 0.960871 | 0.3369 |
| FSIZE\*MAT | -0.006635 | 0.005304 | -1.250856 | 0.2114 |

Effects Specification

S.D. Rho

Cross-section random 0.099512 0.3479

Idiosyncratic random 0.136233 0.6521

Weighted Statistics

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.007505 | Mean dependent var | 0.255424 |
| Adjusted R-squared | 0.000446 | S.D. dependent var | 0.136325 |
| S.E. of regression | 0.135911 | Sum squared resid | 12.98568 |
| F-statistic | 1.063155 | Durbin-Watson stat | 1.151054 |
| Prob(F-statistic) | 0.379566 |  |  |
| Unweighted Statistics | | | |
| R-squared | 0.015758 | Mean dependent var | 0.638491 |
| Sum squared resid | 19.58472 | Durbin-Watson stat | 0.763208 |

|  |  |  |  |
| --- | --- | --- | --- |
| Correlated Random Effects - Hausman Tes Equation: Untitled  Test cross-section random effects | t |  | |
| Test Summary | Chi-Sq. Statistic | Chi-Sq. d.f. | Prob. |
| Cross-section random | 11.799076 | 5 | 0.0002 |

Cross-section random effects test comparisons:

Variable Fixed Random Var(Diff.) Prob.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| FROE\*MAT | -0.037640 | -0.038921 | 0.000069 | 0.8778 |
| FLEV\*MAT | 0.037443 | 0.052733 | 0.000177 | 0.2508 |
| FAGE\*MAT | 0.000361 | 0.000275 | 0.000000 | 0.8549 |
| IND\*MAT | 0.017939 | 0.025270 | 0.000238 | 0.6349 |
| FSIZE\*MAT | -0.004683 | -0.006635 | 0.000004 | 0.3111 |

Cross-section random effects test equation: Dependent Variable: CSR

Method: Panel Least Squares Date: 09/28/21 Time: 20:42 Sample: 2010 2019

Periods included: 10

Cross-sections included: 72

Total panel (unbalanced) observations: 709

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.642559 | 0.008349 | 76.96468 | 0.0000 |
| FROE\*MAT | -0.037640 | 0.030522 | -1.233205 | 0.2180 |
| FLEV\*MAT | 0.037443 | 0.046055 | 0.813005 | 0.4165 |
| FAGE\*MAT | 0.000361 | 0.001020 | 0.354433 | 0.7231 |
| IND\*MAT | 0.017939 | 0.030498 | 0.588193 | 0.5566 |
| FSIZE\*MAT | -0.004683 | 0.005643 | -0.829881 | 0.4069 |

Effects Specification

Cross-section fixed (dummy variables)

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.410523 | Mean dependent var | 0.638491 |
| Adjusted R-squared | 0.339637 | S.D. dependent var | 0.167645 |
| S.E. of regression | 0.136233 | Akaike info criterion | -1.046657 |
| Sum squared resid | 11.72958 | Schwarz criterion | -0.551006 |
| Log likelihood | 448.0399 | Hannan-Quinn criter. | -0.855172 |
| F-statistic | 5.791274 | Durbin-Watson stat | 1.270605 |
| Prob(F-statistic) | 0.000000 |  |  |

Dependent Variable: CSR

Method: Panel EGLS (Cross-section weights) Date: 09/28/21 Time: 20:46

Sample: 2010 2019

Periods included: 10

Cross-sections included: 73

Total panel (unbalanced) observations: 730 Iterate coefficients after one-step weighting matrix

White cross-section standard errors & covariance (d.f. corrected)

Convergence achieved after 14 total coef iterations

WARNING: estimated coefficient covariance matrix is of reduced rank

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.638038 | 0.005863 | 108.8229 | 0.0000 |
| FROE\*DEC | -0.036419 | 0.065026 | -0.560071 | 0.5757 |
| FLEV\*DEC | -0.153499 | 0.108608 | -1.413327 | 0.1583 |
| FAGE\*DEC | -0.009159 | 0.002472 | -3.705033 | 0.0002 |
| IND\*DEC | 0.217508 | 0.057602 | 3.776069 | 0.0002 |
| FSIZE\*DEC | 0.030667 | 0.012086 | 2.537387 | 0.0115 |
| AR(3) | -0.067400 | 0.037603 | -1.792410 | 0.0738 |

Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.716307 | Mean dependent var | 0.970562 |
| Adjusted R-squared | 0.662898 | S.D. dependent var | 0.610928 |
| S.E. of regression | 0.133235 | Sum squared resid | 7.260368 |
| F-statistic | 13.41171 | Durbin-Watson stat | 1.611949 |
| Prob(F-statistic) | 0.000000 |  |  |
| Unweighted Statistics | | | |
| R-squared | 0.491278 | Mean dependent var | 0.638214 |
| Sum squared resid | 7.320285 | Durbin-Watson stat | 1.496504 |

Inverted AR Roots .20+.35i .20-.35i -.41

Dependent Variable: CSR

Method: Panel EGLS (Cross-section random effects) Date: 09/28/21 Time: 20:47

Sample: 2010 2019

Periods included: 10

Cross-sections included: 73

Total panel (unbalanced) observations: 730

Swamy and Arora estimator of component variances

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.638483 | 0.013095 | 48.75647 | 0.0000 |
| FROE\*DEC | 0.059925 | 0.105624 | 0.567345 | 0.5707 |
| FLEV\*DEC | -0.158332 | 0.083663 | -1.892483 | 0.0588 |
| FAGE\*DEC | -0.002269 | 0.002353 | -0.964495 | 0.3351 |
| IND\*DEC | 0.069372 | 0.073087 | 0.949168 | 0.3429 |
| FSIZE\*DEC | 0.013408 | 0.011112 | 1.206675 | 0.2280 |

Effects Specification

S.D. Rho

Cross-section random 0.101801 0.3588

Idiosyncratic random 0.136091 0.6412

Weighted Statistics

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.006714 | Mean dependent var | 0.250354 |
| Adjusted R-squared | -0.000351 | S.D. dependent var | 0.136050 |
| S.E. of regression | 0.135701 | Sum squared resid | 12.94555 |
| F-statistic | 0.950302 | Durbin-Watson stat | 1.149363 |
| Prob(F-statistic) | 0.447707 |  |  |
|  | Unweighted | Statistics |  |
| R-squared | 0.005001 | Mean dependent var | 0.638491 |
| Sum squared resid | 19.79877 | Durbin-Watson stat | 0.751518 |

Correlated Random Effects - Hausman Test Equation: Untitled

Test cross-section random effects

Test Summary

Chi-Sq.

Statistic Chi-Sq. d.f. Prob.

Cross-section random 12.050053 5 0.0004

Cross-section random effects test comparisons:

Variable Fixed Random Var(Diff.) Prob.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| FROE\*DEC | 0.053248 | 0.059925 | 0.000218 | 0.6511 |
| FLEV\*DEC | -0.158916 | -0.158332 | 0.000123 | 0.9580 |
| FAGE\*DEC | -0.002435 | -0.002269 | 0.000000 | 0.6726 |
| IND\*DEC | 0.061758 | 0.069372 | 0.000158 | 0.5453 |
| FSIZE\*DEC | 0.014972 | 0.013408 | 0.000005 | 0.4719 |

Cross-section random effects test equation: Dependent Variable: CSR

Method: Panel Least Squares Date: 09/28/21 Time: 20:49 Sample: 2010 2019

Periods included: 10

Cross-sections included: 72

Total panel (unbalanced) observations: 709

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 0.637687 | 0.005248 | 121.5083 | 0.0000 |
| FROE\*DEC | 0.053248 | 0.106651 | 0.499268 | 0.6178 |
| FLEV\*DEC | -0.158916 | 0.084395 | -1.883000 | 0.0602 |
| FAGE\*DEC | -0.002435 | 0.002385 | -1.020721 | 0.3078 |
| IND\*DEC | 0.061758 | 0.074163 | 0.832731 | 0.4053 |
| FSIZE\*DEC | 0.014972 | 0.011322 | 1.322354 | 0.1865 |

Effects Specification

Cross-section fixed (dummy variables)

|  |  |  |  |
| --- | --- | --- | --- |
| R-squared | 0.411753 | Mean dependent var | 0.638491 |
| Adjusted R-squared | 0.341015 | S.D. dependent var | 0.167645 |
| S.E. of regression | 0.136091 | Akaike info criterion | -1.048746 |
| Sum squared resid | 11.70510 | Schwarz criterion | -0.553095 |
| Log likelihood | 448.7806 | Hannan-Quinn criter. | -0.857261 |
| F-statistic | 5.820778 | Durbin-Watson stat | 1.270836 |
| Prob(F-statistic) | 0.000000 |  |  |

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[evidence from Islamic banks around the world](https://researchportal.port.ac.uk/portal/en/publications/the-determinants-of-social-accountability-disclosure(0cef82a7-8475-4fec-935a-dfb331a4948a).html). International Journal of Business, 20(3), 202-223. <http://www.craig.csufresno.edu/ijb/Volumes.htm#V20>.

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