

**FIRM ATTRIBUTES AND CORPORATE SOCIAL RESPONSIBILITY DISCLOSURE OF  
LISTED OIL AND GAS MARKETING COMPANIES IN NIGERIA**

**BY**

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**A DISSERTATION SUBMITTED TO THE DEPARTMENT OF ACCOUNTING,  
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## DECLARATION

I, Sunusi Ibrahim Madaki, hereby declare that this work is entirely the product of my own research undertaken under the supervision of Professor Dije Muhammad Suleiman. All the sources are duly acknowledged in the references and any act of commission or omission is not intended. I assume full responsibility for any error(s) remaining.

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CERTIFICATION

This is to certify that the research work for this dissertation and its subsequent preparation by Sunusi Ibrahim Madaki (SPS/14/MAC/00024) are carried out under my supervision.

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Date

APPROVAL PAGE

This thesis, titled “Firm Attributes and Corporate Social Responsibility Disclosure Of Listed Oil And Gas Marketing Companies in Nigeria” has been supervised and approved as meeting the requirements for the award of Masters of Science Degree (M.Sc.) in Accounting from Bayero University, Kano and is approved for its literary presentation and contributions to knowledge.

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## DEDICATION

This dissertation is dedicated to my late grandmother, Hajiya Amina Hassan, who had brought me up and laid the foundation of my educational pursuit. May her soul rest in Jannatul Firdaus (ameen).

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## ABSTRACT

This study examined the level of corporate social responsibility disclosure as well as the impact of ownership structure, board characteristics and financial performance on the extent of corporate social responsibility disclosure (CSR) by listed oil and gas marketing companies in Nigeria. Population of the study comprised twelve (12) oil and gas marketing companies that are listed on the floor of the Nigerian Stock Exchange market from 1<sup>st</sup> January, 2006 to 31<sup>st</sup> December, 2017. Eight companies emerged as the sample for the study after using the census sampling technique. Data was collected from annual reports and accounts of the sampled companies for the period covered by the study (2006 to 2017). Data was analyzed by means of descriptive statistics, Spearman correlation and Regression analysis techniques using STATA version 13. Findings revealed that the level of CSR of Nigerian listed oil and gas marketing companies is moderate (52% on average). Moreover, the findings also revealed that, among all the explanatory variables adopted by the study, only ISO, BG, ROA, EPS, LEV and AGE were found to have significant influence on the extent of the CSR of Nigerian listed oil and gas marketing companies. However, MSO, BS, LIQ and SIZE were all found to have an insignificant effect on CSR. Moreover, based on the findings the study recommended that the Nigerian listed oil and gas marketing companies should sustain or even improve the level of their CSR activities and its subsequent disclosure in their annual reports. Additionally, regulatory authorities should continue to encourage companies to voluntarily disclose more CSR information in their annual reports or even consider making it as part of the statutory / regulatory requirements, as practiced in some countries around the world (like Malaysia and China), as this will go a long way in satisfying the information needs of various users of financial statements.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background to the study**

Globally, researchers (Bandara, 2016, Garko, 2015, Juhmani, 2014; Sulaimana, Abdullah & Fatima, 2014; Joshi & Batra, 2014; Khemir & Baccouche, 2010; Samaha & Dahawy, 2010 Reverte, 2009 & Watts, 1977) have been trying to understand, explain and justify Corporate Social Responsibility Disclosure (CSR/D). CSR/D is a process of providing information about interactions between companies with regard to environment, employees, society and consumer issues (Gray, Javad, Power & Sinclair, 2001). It is also a process of providing financial and non-financial information in the social and environment contexts (Hackston & Milne 1996). It is an umbrella term that describes various means by which companies disclose information on their environmental activities to the users of financial statements (Alok, Nikhil & Bhagaban, 2008). In addition, CSR/D is an extension of the financial disclosure system, which reflects the wider anticipation of society concerning the role of the business community in the society. It includes all the information reported to stakeholders about the social and environmental effects of a company's actions. It involves extending the accountability of the company beyond the traditional role of providing a financial account to shareholders. This information could be qualitative or quantitative in nature or both and can be reported in the firm's audited financial statements, a specific report, a media release or other forms of communication (Adams & Shavit, 2011).

Identifying the motivation for the company's disclosure of social information is an important research tradition in the corporate social reporting literature (Owen, 2005). Many theories and approaches have been used by different researchers in both developed and emerging economies in order to identify the factors that motivate companies to voluntarily disclose social and environmental information in their audited financial statements. The most widely used theories are: the agency theory, political economy theory, stakeholder theory and legitimacy theory. Although a considerable part of literature has been undertaken in the emerging economies during the first decade of this century, still they require a special attention in this regard (Hopper, Tsamenyi, Uddin & Wickramasinghe, 2009) and important future research is still needed (Belal & Momin, 2009).

Thus, there has been a great deal of academic researches into CSR reporting practices by corporations operating in different parts of the world. Researchers in academics working in the realm of Corporate Social Responsibility (CSR) have shifted their focus from measuring the level of CSR in audited financial statements to exploring its determinants. Academic researchers (Bandara, 2016, Garko, 2015, Juhmani, 2014; Naser & Hassan, 2013; Farouk & Hassan, 2013; Kansal, Al- Shubiri, Al-abedallat & Abu Orabi, 2012; Yee, Yen, Kian, Von & Keong, 2012; Arshad & Vakhidulla, 2011; Yao, Wang & Song, 2011; Reverte, 2009 & Watts, 1977) have made rigorous efforts to explore the determinants of CSR made by the corporate sector in the absence of binding standardization or legal requirement and succeeded in demonstrating that the level of CSR depends on certain factors / firm characteristics, which include but are not limited to financial performance (profitability, leverage, liquidity, growth), ownership structure (ownership concentration, institutional & managerial shareholding), board characteristics (board gender & board size), firm size, age and media exposure. However, there

are varying levels of success from these studies upon which many of the researchers were found to have different views, as they come up with divergent findings on how certain factors influence CSR practices. Some of the aforementioned studies found a significant or an insignificant positive relationship between CSR and its determinants, while other studies found a significant or an insignificant negative relationship between CSR and its determinants. This inconsistency among the researchers may be realistic due to the fact that the circumstance under which each of the studies was conducted significantly differed. Additionally, Wallace, Naser & Mora (1994) argued that the peculiarities associated with each study, such as the type and number of firms included in the sample, the number of items included in the disclosure index, the independent variables as well as the controlled variables used in the studies, different methodology adopted by the researchers and the country where each study was conducted, are the factors that jointly or severally contributed to the mixed results from such studies.

In Nigeria, the emergence of agencies, such as the Federal Environmental Protection Agency (FEPA) in 1988 and the National Environmental Standards and Regulation Enforcement Agency (NESREA) in 2007, marked the new era of environmental regulations for the nation (Akinlo & Iredele, 2014). NESREA requires all companies whose activities have a significant impact on the environment to obtain operational license and permit as a way of complying with the environmental regulations.

The determinants of CSR examined in Nigerian studies were the same as those adopted in other countries around the world with the exception of media exposure. Some of the studies that have recently explored the determinants of CSR in Nigeria (Muhammad, 2015, Garko 2015; Akanno, Ferdinand, Radda & Uzodinma, 2015; 2015; Farouk & Hassan, 2013; Ebiringa, Yadirichukwu, Chigbu & Obi, 2013 and Uwuigbe & Egbide, 2012) revealed that the major

drivers of CSRD were financial performance (profitability, growth, leverage and liquidity), ownership structure (ownership concentration, institutional and managerial shareholding), board characteristics (board size and board gender), industry type, firm size and audit firm type.

### **1.2 Statement of the Research Problem**

Nigeria kept striving to increase crude oil production to meet the local demand for refined petroleum products. The demand for the four domestic refineries was at least 500, 000 barrels of crude oil per day (Okoromadu, 2016). However, the greatest challenge facing oil and gas production and distribution in the country has been the activities of oil thieves and pipeline vandals (Tamuno, 2011 & Njoku, 2016). Oil and gas pipelines are part of the critical infrastructures and vital assets to the nation. They are used in transporting both crude oil and refined petroleum products to refineries, oil depots and thermal power stations and flow stations (Njoku, 2016). The effects of this menace on the socio-economic development of Nigeria include loss of revenue from oil by the government and serious disruption in the smooth distribution of petroleum products across the country, leading to fuel scarcity (Asu, 2016). Serious sabotage to the effort of the federal government to achieve a stable and sustainable power supply in the country, as power sector was reported to be losing an average of N2billion daily (Nnodim, 2016), social insecurity and the divestment of foreign investments consequently lead to massive loss of jobs in the oil and gas industry (Salau, 2014), By extension all these unwanted tragedies bedeviling the upstream sector of the Nigerian economy have a multiplier effect on the activities of the downstream sector, particularly oil and gas marketing companies.

Corporate social responsibility disclosure (CSRD) studies conducted in Nigeria are usually associated with one limitation or the other, either in terms of the number of items included in the

CSR index, the independent & controlled variables used, the measurement of the dependent and independent variables, the methodology used, the unit of study investigated and the period covered by the studies. For instance, Uwuigbe & Egbide (2012) investigated the relationship between firms' corporate financial performance and leverage with the level of CSR by companies listed on the Nigerian Stock Exchange (NSE). Their study covered only one year (2008). They used financial performance, size of audit firm and financial leverage as determinants and adopted the CSR index that contained 28 items. Another study by Ali & Isa (2018) examined the impact of Board Attributes on the Corporate Social responsibility Disclosure of listed Cement companies in Nigeria. Their study covered a period of ten years (2004 to 2014). Its population comprised four cement companies listed on the Nigerian exchange market as at 31<sup>st</sup> December, 2014 out of which three emerged as the sample. They used board size, board composition and managerial share ownership as determinants. They also developed a CSR index that contained 21 items for their study. Also, Ebiringa, Yadirichukwu, Chigbu & Obi (2013) examined the effect of firm size and profitability on the extent of CSR by oil and gas companies listed on the Nigerian stock exchange market (NSE). Their study covered only one year (2011). Firm size, profitability and company origin were used as determinants and they adopted a CSR index that contained 22 items. Also, Farouk & Hassan (2013) examined the financial and non-financial determinants of CSR of the listed deposit money banks (DMB's) in Nigeria from 2005 to 2011. Size, leverage, growth, dividend, profitability and institutional ownership were used as determinants. This study differed from each of the aforementioned studies in terms of the variables examined, because, in addition to the variables they adopted as determinants, additional variables would be used and certain variables they adopted dropped. Also, the CSR index that contained 37 items developed for this study also differs from the

CSR index adopted in such studies. This study is also going to cover a period of twelve years (2006 to 2017) as against one year covered by Uwuigbe & Egbide (2012), Ebiringa, Yadirichukwu, Chigbu & Obi (2013), seven years by Farouk & Hassan (2013) and ten years by Ali & Isa (2018). This study also differs from the studies by Uwuigbe & Egbide (2012), Ali & Isa (2018) and Farouk & Hassan (2013) in terms of the unit of study. Moreover, the measurement of certain independent and controlled variables that are common in both studies also differs. This study also provides current empirical evidence on the association between certain factors used as determinants and the level of CSR. Therefore, it is based on these facts that this study emerged, aimed at examining the level as well as the determinants of the CSR of listed oil and gas marketing companies in Nigeria.

Based on the problem statements, the following research questions were raised:

- i. What is the level of the CSR of the listed oil and gas marketing companies in Nigeria?
- ii. What is the impact of ownership structure on the extent of CSR of listed oil and gas marketing companies in Nigeria?
- iii. What is the impact of Board characteristics on the extent of CSR of listed oil and gas marketing companies in Nigeria?
- iv. What is the impact of financial performance on the extent of CSR of listed oil and gas marketing companies in Nigeria?

### **1.3 Objectives of the study**

The main objective of this study is to assess the determinants of the CSR of the listed oil and gas marketing companies in Nigeria. Other specific objectives of the study are to assess the:

- i. Level of the CSR of the listed oil and gas marketing companies in Nigeria

- ii. Impact of ownership structure on the CSRD of the listed oil and gas marketing companies in Nigeria
- iii. Impact of Board characteristics on the CSRD of the listed oil and gas marketing companies in Nigeria
- iv. Impact of financial performance on the CSRD of the listed oil and gas marketing companies in Nigeria

#### **1.4 Research Hypothesis**

Based on the objectives of the study, the following hypotheses are formulated in null form:

- i. Ownership structure has no significant impact on the extent of the CSRD of the listed Oil and Gas marketing companies in Nigeria.
- ii. Board characteristics have no significant impact on the extent of the CSRD of the listed Oil and Gas marketing companies in Nigeria.
- iii. Financial performance has no significant impact on the extent of the CSRD of the listed Oil and Gas marketing companies in Nigeria.

#### **1.5 Scope of the Study**

This study is restricted to the assessment of the determinants of the CSRD by the listed oil and gas marketing companies in Nigeria for the period of twelve years, starting from 1<sup>st</sup> January, 2006 to 31<sup>st</sup> December, 2017. However, the CSRD to be covered by this study is restricted to four classes of CSR information, which include environmental, consumer related, employee-related and community involvement related information. This decision was informed by the fact that Gray, Dey, Owen, Evans & Zadek, (1997), Deegan, (2002) and Jizi, Salama, Dixon & Stratling, (2013) postulated that CSRD information consists of the above four classes of information.

## **1.6 Significance of the Study**

This study will be very vital due to the following reasons: It will assist researchers in their quest for knowledge, thereby adding to the existing body of the literature on the determinants of CSR in emerging economies like Nigeria, thereby exploring factors that influence CSR practiced by Nigerian listed oil and gas marketing companies. Moreover, it will invariably assist other companies in various sectors of the economy in deciding the type and extent of CSR to be made in their annual reports & accounts.

It will also be useful to the Nigerian economy, particularly the Nigerian government, Oil and gas marketing companies and the general public, thereby serving as a measure of the adequacy or otherwise of how operators in the oil and gas sector are socially responsible in the conduct of their businesses as perceived by Nigerians. It will invariably assist Government in making policies that will reduce the negative effects and increase the positive effects of the activities of oil and gas marketing companies on their operating environments and also motivate oil and gas marketing companies to be much more socially responsible as expected of them and motivate them to voluntarily disclose such facts in their annual reports and accounts. This may likely sensitize the general public. It is also expected that there will be an increase in revenue from oil to the Nigerian government. It is also expected to result in stable and sustainable power supply in the country. Moreover, the divestment of foreign investments that usually resulted in the massive loss of jobs will equally be reduced to the barest minimum. Briefly, all the unwanted tragedies bedeviling the upstream sector of the Nigerian economy will likely be addressed.

It will also assist the regulatory authorities, such as the Financial Reporting Council of Nigeria (FRCN), Nigerian Accounting Standard Board (NASB) and professional accounting bodies, thereby highlighting the type and extent of CSR by companies in the downstream sector of the

Nigerian economy. And this will enable them to come up with the standards and regulations that will stimulate, improve or even standardize CSRD by Nigerian listed companies as practiced by other countries around the world (like Malaysia and China).

## CHAPTER TWO

### LITERATURE REVIEW

#### **2.1. Introduction**

This section deals with a review of related literature on the determinants of CSRD. It entails the review of CSR and CSRD concepts and the relevant theories that explain the study, with a view to identify the gap which the study aimed to address.

#### **2.2 Historical development of CSR and CSRD**

The early roots of CSR can be traced back to 1917, when Henry Ford announced that the aim of the Ford Motor Company was to do as much as possible for everybody concerned, to give employment and send out the car where the people could use it and incidentally make money (Lee, 2008, as cited in Wang, 2015). Eighty years later, Henry Ford's great-grandson, William Clay Ford, Jr. emphasized that the Ford company valued all stakeholders' interests as well as the social welfare of employees and shareholders, as he said that they wanted to find ingenious new ways to delight consumers, provide superior returns to shareholders and make the world a better place for everybody (Meredith, 1999, as cited in Wang, 2015).

From a business practice perspective, Ford was one of those companies that initiated social responsibility activities. However, from a research perspective, many scholars believe that Bowen's *Social Responsibilities of the Businessman*, a book wrote in 1953, is the first work to discuss the relationship between corporations and society (Carroll 1979; Wartick & Cochran 1985 as cited in Wang, 2015). In this book, Bowen (1953) argues that firms need to be cognisant of business ethics to achieve long-term superior performance. This showed that the 1950s marked the beginning of the modern era of the CSR literature. He defined the CSR concept as

the obligations of businessmen to pursue those policies, to make those decisions or to follow those lines of actions which are desirable in terms of the objectives and values of our society. The most important argument made by Bowen is that the concept of CSR contains an important truth that must guide every business in the future. 1960s is a decade that marked the remarkable growth of attempts by academic researchers in order to give more accurate meaning to the CSR concept. Davis (1960) defined it as a businessmen's decisions and actions taken for reasons at least partially beyond the firm's direct economic or technical interest. However, McGuire (1963) tries to come up with a more precise definition of the CSR concept, thereby defining it as the idea of social responsibilities that supposes that the corporation has not only economic and legal obligations but also certain responsibilities to society which extend beyond these obligations. In the 1970s, the CSR concept is perceived by Johnson (1971) as conventional wisdom, long-run profit maximization, utility maximization and a lexicographic view of social responsibility. Steiner (1971) stated that business is and must remain fundamentally an economic institution, but it has social responsibilities to help society to achieve its basic goals. The 1980s was characterized by more theories, models and researches on CSR and few definitions of the CSR concept. Jones (1980) concluded that the CSR concept should be viewed as the process but not as a set of outcomes. Dalton and Cosier (1982) developed a model by depicting a 2x2 matrix. This model has legal and illegal variables on one axis and responsible and irresponsible variables on another axis. Overall, there are four faces of social responsibility presented by the four cells in the matrix. The conclusion is that the legal-responsible face is the most appropriate CSR strategy for the firms to follow.

1990s: In this decade, there was more transition of the CSR concept to alternative topics as the business ethics theory, stakeholder theory, corporate citizenship and Corporate Social

Performance. It does not mean that writers have rejected the CSR concept, but just that there were no new definitions of the CSR added to the literature. During this period of time, there was still remaining a trend to operationalize the CSR concept and conduct other concepts that were related to the CSR theory (Carroll, 1999).

Beginning of the 21st Century: This century is characterized as the era of emerging CSR industry. McBarnet, Voiculescu and Campbell, (2009) opined that presently Multinational Corporations have CSR departments and hire CSR managers and consultants. Universities held CSR conferences and researchers are contributing immensely to the CSR literature. Publishers print books and journals related to the CSR, while journalists report on the CSR issues in newspapers. After the collapse of Enron in 2001, the public became more watchful than ever before on what the corporations were saying and doing in practice regarding the CSR. Now the corporations are under high pressure of being more transparent and exhibit better in terms of the accountability (Mardjono, 2005). Rahman, (2011) stated that CSR reporting becomes mandatory in many countries. For this reason, organizations put their CSR reports on their websites or include it as an integral part of their audited financial statements in order to give access to stakeholders, so that they can know what corporations do for the society.

Briefly, it can be concluded that there are various views and definitions related to CSR. One of the reasons for that is because there are a lot of different activities, tools and issues that companies take into consideration. Few examples of the CSR issues and activities can be non-financial reporting, pollution reduction, labor and human rights and sustainable research and development (Barth & Wolff, 2009). Orlitzky (2005) argued that some researchers distort the definition of CSR so much that the concept becomes morally vacuous, conceptually meaningless and utterly unrecognizable. While Van Marrewijk (2003) viewed the CSR concept as the

panacea which will solve the global poverty gap, social exclusion and environmental degradation. The initial ideas of the CSR were the contribution to the society's well-being and the responsibility towards the environment. Since this management's instrument has brought much success for the companies which were applying it, now it has become a global business concept (Ehlert, 2010). Blyth (2005) argued that there is no single definition of what it takes to be a responsible corporate. The key is to have a rigorous process for identifying those responsibilities and fulfilling them.

### **2.2.1 The Concept of CSR and CSRD**

CSR was described by McWilliams and Siegel (2001) as actions that appear to further some social good beyond the interest of the firm and that which is required by law. The definition of what would exemplify CSR consisted of an action that the firm chooses to take which substantially affects social stakeholder welfare. CSR is viewed as a comprehensive set of policies, practices and programs that are integrated into business operations, supply chains and decision-making processes throughout the company and usually include issues related to business ethics, community investment, environmental concern, governance, human rights and the market place, as well as the workplace (Bello, 2012).

While CSRD is defined as a process of providing information about interactions between companies with regard to environment, employees, society and consumer issues (Gray et al. 2001), it is also a process of providing financial and non-financial information in the social and environmental contexts (Hackston & Milne, 1996). Mathews and Pereira (1997) (as cited in Hassan, 2007) defined CSRD as an extension of disclosure into non-financial issues, such as the provision of information about employees, product, community service and the prevention or reduction of pollution, as well as evaluating performance in this area. Wry and Deephouse

(2005) defined CSR as seriously considering measuring and reporting the impact of enterprise actions on the Society. In addition, CSR is an extension of the financial disclosure system, which reflects the wider anticipation of society concerning the role of the business community in the economy. CSR includes all the information reported to stakeholders about the social and environmental effects of a company's actions. As such, it involves extending the accountability of the company beyond the traditional role of providing a financial account to the owners of capital. This information could be of qualitative or quantitative nature or both and may be reported in the Audited financial statements, a specific report, a media release or other forms of communication as a means of achieving the company's objectives (Adams & Shavit, 2011).

CSR consists of four classes of information; the environmental, the consumer-related, the employee-related and the community involvement-related (Gray, Dey, Owen, Evans & Zadek, 1997, Deegan, 2002; Jizi, Salama, Dixon & Stratling, 2013).

**Environmental Disclosure:** This category of disclosure is used to introduce information about the impacts of an organization on the physical environment. Van et al (2005) studied environmental disclosures and discovered that they were made up of these items: Environmental Financial, Environmental Audit, Environmental Policy, Environmental Products and Processes, Sustainability, Energy, Waste Management Programs, Emissions levels and controls, Environmental Impact Assessments, Fish-stocking programs, Energy Conservation Activities, Landscaping Activities, and Electromagnetic Radiation Monitoring Systems and Environmental other.

**Community Involvement Disclosure (CID):** This category of disclosure refers to any disclosure of company information related to community involvement. Van, Smith, Adhikari and Tondkar, (2005) stated that CID included charity and political donations, support for education, support

for public health, support for the arts and culture, sponsoring sporting or recreational projects, educational programs offered, plant site visitations, support for local school, sports and cultural activities, volunteer programs and social programs.

**Community Relations Disclosure:** refers to companies' communication of the various methods they use to establish and maintain a mutual beneficial relationship with the communities in which they operate. When a company accepts its civic responsibility and takes an active interest in the well-being of its community, then it gains a number of long term benefits in terms of community support, loyalty and general good will. Community involvement builds public image and employee morale and fosters a sense of team work that is essential in long term success. It is concerned solely with how to create an enabling environment in the host community, so that the company can carry out its activities without any hindrance, but rather with the assistance and support of host inhabitants.

**Employee Disclosure:** This type of disclosure includes information about the effects of organizational activities on employees. According to Van, Smith, Adhikari and Tondkar, (2005) such disclosures covered these: employee data, pension data, consultation with employees, employment of disabled, Value-added statements, health and safety, share ownership, equal opportunities, overall description of working environment, number of employees, absentee rate, number of minorities employed, health programs offered, education/training programs, vacation information and safety issues.

**Consumer Disclosure:** These are issues that concern consumers due to the qualitative aspects of the products and stakeholder rights, such as product and consumer safety. This kind of disclosure encompasses these items: product and consumer safety, consumer complaints, provision for disabled, provision for difficult to reach customers, product safety information and programs,

ease of self-metering reading systems, customer service upgrades, additions/improvements to customer service centers/hours, upgrades to customer service programs, improvements in billing payment methods, product reliability improvements and stakeholder rights-related disclosures (Van, Smith, Adhikari & Tondkar, 2005).

### **2.2.2 Corporate responsibility reporting according to Global Reporting Initiative (GRI)**

**A. Global Reporting Initiative (GRI):** is an international not-for-profit organization with a network-based structure. Its activity involves thousands of professionals and organizations from many sectors, constituencies and regions. It is an organization that has managed to impose its reporting practices on corporate responsibility among large transnational companies. The model proposed by GRI is based on the supposed convergence between the economic, social and environmental dimensions of sustainable development. This convergence can be presumed at the macroeconomic level, but at the level of enterprises, the three dimensions are often divergent (Chersan, 2016). GRI's mission is to make sustainability reporting standard practice. To enable all companies and organizations to report their economic, environmental, social and governance performance, GRI produces free Sustainability Reporting Guidelines.

#### **GRI Guidelines on CSR reporting**

GRI's Guidelines feature reporting principles and standard disclosures. The ten (10) Principles that offer guidance on best practice for CSR reporting include materiality, stakeholder inclusiveness, sustainability context, completeness, balance, comparability, accuracy, timeliness, clarity and reliability.

The guidelines contents are classified into three categories: the economic, the environmental and the social. The social category is further broken down to labor, human rights; society and product

responsibility sub-categories. GRI also provides sector guidance. By 2012, GRI had published 10 sector supplements – versions of its guidelines that are tailored to address the CSR issues of specific sectors. GRI strives for its framework to harmonize with other reporting tools worldwide. The guidelines include broad references to other global initiatives. This makes it easier for organizations to understand how complementary guidance can be used together, helping them to prepare reports swiftly. Alignments and synergies between GRI's framework and other instruments include those with the UN global compact principles and communication on progress, those with the OECD guidelines for Multinational enterprises; those with ISO 26000 (the international organization for standardization) and lastly, those with the carbon disclosure project.

**B. International comparison of CSR reporting according to global reporting initiative:**

There has been a significant increase in the number of standards concerning CSR coupled with a similar increase in their popularity. Ligteringen & Zadek (2005) discovered that there existed approximately 300 standards pertaining to CSR and or CSRD globally. They postulated that all these standards and codes could be divided into three categories which include the normative frameworks (which instruct companies what to do), the guides (which instruct companies how to evaluate and communicate information about their actions) and Management systems (which help companies to integrate their activities).

Amidst this multitude of standards, GRI offers a guide through which environmental problems should be better connected to the other aspects that are fundamental in promoting the development of a sustainable society (Marimo, Alonzo-Almeida & Rodriguez, 2012). A significant number of researchers and institutions consider that GRI is the most frequently used

standard at the world level in corporate non-financial reporting (Skouloudis, Evangelinos & Kourmousis, 2009 and Prado-Lorenzo, Gallego-Alvarez & Garcia-Sanchez, 2009).

It has been observed that more companies are increasingly being involved in the process of issuing and implementing CSR standards, especially environmental standards. Chersan (2015) argued that, as a result of rising responsibility towards the society, companies have started publishing information connected to CSR in a separate reports that accompany audited financial statements. Voluntary compliance implies going beyond legal obligations. Schwindenhammer (2013) studied company voluntary norm adoption and identified two types of behaviors: the companies that contribute to the process of establishing and developing norms and consequently are considered norm- entrepreneurs, and the companies that accept and implement certain norms and are considered norm-consumers. Also, norm-consumers can be grouped in two categories: those that accept norms and those that implement them. Norm acceptance occurs after the institutionalisation of norms and implies the fact that companies publicly admit that the norms have been adopted. Unlike norm acceptance, norm implementation always supposes an individual effort of the company that has to adjust its practices, especially in the field of corporate reporting. Taking into account the degree of norm acceptance and implementation. Schwindenhammer, (2013) further identified three categories of entities: those that accept and implement international norms comprehensively (all-embracing norm-consumer), those that admit that their activity occurs under the incidence of these norms, but implement them incompletely and inconsequently (incomplete norm- consumer), and finally those that reject the acceptance and implementation of the norms (non-consumer).

Company behavior relative to the acceptance of the GRI suggests how it wants to be a 'global player' that will be socially accepted. This means that a company must at least subscribe to few

international norms concerning human rights and environmental protection and issue reports accordingly via changes in management and production rules (Risse, 2007).

GRI was launched in 1999 and since then a generally accepted framework on CSR reports content, format and style has been developed (Brown, de Jongi & Lessidrenska, 2009), which has extended companies' responsibility beyond their traditional role to publish financial information. After the third generation of GRI guides – G3 was published in 2006, 2013 saw the emergence of a fourth generation of GRI guides – G4, as a result of an extended and structured process of public consultation. Let us mention here that GRI does not monitor compliance with norms, nor does it sanction incompliance. It only requires companies to declare their level of applying the general GRI framework, thus differentiating between the categories of firms that report according to these standards. Actually, the GRI guidelines suggest the ways in which a company can show what it does. Although it does not require organizational changes or external company performance appraisal, GRI carries out evaluations that analyze a company's adjustment to the issued guides. In order to increase the credibility of the issued reports, the latter are often checked by auditing firms, such as Deloitte, PriceWaterhouseCoopers, KPMG or Ernst & Young.

Actually, the very purpose of developing such guidelines is to offer better reporting solutions.

Also, Marimon, Alonzo-Almeida and Rodriguez (2012) argue that the objective of the GRI guide is to create reports that would complement, rather than replace other company reports. GRI reports contain information related to a company's economic, environmental and social issues. This approach is known as Triple Bottom Line (Elkington, 1994), also incorporates the so-called "3 p's" (people, planet and profit) and offers a general framework that allows the evaluation and reporting of an entity's results based on economic, social and environmental parameters. Writing

about the reporting model proposed by GRI, Prado-Lorenzo, Gallego-Alvarez and Garcia-Sanchez (2009) postulated that it is a harmonized, standardized, easy to understand and objective report for companies worldwide. Also, Clarkson, Overell and Chapple (2011) state that recent studies indicate a significant relation between information published voluntarily (mentioned in the GRI guide) and environmental performance.

The adoption of CSR practices takes different paths in different countries of the world due to cultural, legal, political, economic and social differences. Thus, Konrad, Steurer, Langer and Martinuzzi, (2006) argued that firms in developed countries wish to boost their reputation. Hence, they highlight gender and minority issues from their internal activity and point out social activities as external activities. Developing countries wish to achieve visibility for international investors and, consequently, focus on compliance with international requirements concerning products and social issues. In addition, in developed countries, governments are the main promoters of CSR practices, while in developing countries, governments are reluctant to legislation concerning the environment, labor conditions or curbing corruption. A similar opinion is shared by Jamali (2007), who noticed that corporate social responsibility does not raise particular interest in developing countries because the civil society in these countries is not sufficiently organized and governments do not promote CSR practices. However, Lahinen and Myllyviita (2015) stated that the impact on landscape, length of impact, spiritual values, persistence of traditions and adaptability to cultural changes are not at all approached in GRI guidelines.

Certain studies (Konrad, Steurer, Langer & Martinuzzi, 2006; Waddock, 2008; Perez-Batres, Miller & Pisan, 2010) suggested that the desire to gain the market's trust, attract or maintain investors, improve a country's image and adopting GRI standards in CSR reporting became

inevitable. Other authors (Khanna, 2001; Porter & Kramer, 2006) considered that adopting CSR standards would be used to identify competitive advantages.

First, we noticed that companies which operate in Europe and in Asia are ranked on the top position as far as publication of reports written according to GRI is concerned and are followed by companies that operate in Latin America. Waddock, (2008) identifies the highest rate of GRI adoption in China and explains it by the fact that this country has been accused of disasters and abuse in terms of free completion and human rights. Hence, China is concerned with improving its CSR practices and its reputation in terms of sustainability. Secondly, the GRI guides are adopted by companies, which operate in sectors of high environmental risk (chemicals, mining and energy). Many of these firms are also very visible on the capital market.

KPMG's study on CSR in 2015 showed that the tendency among companies to include more information on corporate responsibility in audited financial statement is determined by two factors: information concerning CSR is increasingly more perceived by shareholders as relevant to understand the risks and opportunities that are specific to the company and stock exchanges and governments institute requirements for companies concerning the inclusion of CSR information in annual reports.

### **2.3 Review of Empirical studies on the Determinants of CSR**

Voluntary Disclosure means making public the financial and non-financial information regarding a firm's operations without any legal requirements or guidelines by the authorities (Fishman & Hagerty, 1997; Botosan, 1997 and Alsaed, 2006). Meek, Rovers and Gray, (1995) also defined voluntary disclosures as, "disclosures in excess of requirements, representing independence choices on the part of company management to provide any other information that deemed relevant to the decision needs of users of annual reports especially the stakeholders of the

companies". CSR information is part of the information voluntarily disclosed in audited financial statements. And this is due to the fact that community awareness has put more pressures on firms to participate in CSR activities and such pressures make it necessary for firms to engage in CSR, since CSR is still voluntary and not compulsory (Siregar, & Bachtiar, 2010).

Researchers in both developed and emerging economies have been trying to explore the determinants of CSR using different firm's specific characteristics as independent variables, with varying levels of successes. The independent variables are the factors considered to be the determinants of CSR. Hence, the independent variables adopted for this study are ownership structure (proxied as institutional share ownership and managerial share ownership), board characteristics (proxied as board size, board composition and board gender) and financial performance (proxied as profitability, liquidity, EPS and leverage).

### **Ownership structure (ISO and MSO) and CSR**

Previous studies on the determinants of CSR pointed out a possible relationship between ownership structure and the level of CSR by corporations. Management of companies may opt to disclose detailed social responsibility information in order to attract investments and signal that they are operating in line with society's expectations. Hence, legitimizing their existence and activities and promoting transparency. Roberts (1992) argued that the degree to which the ownership of company stock is concentrated in the hands of a few large investors or dispersed among many was found to influence the disclosure policy. Opportunistic management behavior and conflict of interests between agents and principals are more likely to occur in corporations with more dispersed ownership. In a widely held company, voluntary disclosure can act as a bonding and monitoring tool reducing agency conflicts between managers and shareholders (Jensen & Meckling, 1976). Evidence suggests that ownership dispersion across many investors

contributes to increased pressure for voluntary disclosure (Cullen & Christopher, 2002). Hence, corporations with many owners are much more expected to disclose more information voluntarily than corporations with concentrated ownership in order to reduce information asymmetries between the organization and its shareholders (Prencipe, 2004). Firms whose shares are widely held are more likely to improve their financial reporting policy by using their CSR in order to reduce these asymmetries. On the contrary, those with a concentrated ownership structure are less motivated to disclose additional information, as long as their shareholders can obtain such information directly from the firm. Findings from certain CSR studies revealed a positive association between capital structure and the level of CSR (Naser & Hassan, 2013, Wang, Jiaotong, Song & Yao 2013, Yao, Wang & Song, 2011). On the other hand, some researchers have found a negative relationship between capital structure and the level of CSR (Reverte, 2009, Arshad & Vakhidulla, 2011). Therefore, for the purpose of this study capital structure is referred to as Institutional Share Ownership (ISO) and Managerial Share Ownership (MSO). They are measured as a percentage of capital held by institutional investors and that of capital held by Directors of the company, respectively.

### **1. Institutional Share Ownership and CSR**

Institutional investors have strong incentives to monitor corporate disclosure practices as a result of their large volume of investment. Thus, managers may engage in CSR in order to meet the expectations of this category of investors. Institutional investors tend to have communication with senior the managers of companies existing in their portfolio and participate in closed door meetings (Ramsay & Lang, 2000). As a result of their supervisory roles, these investors gain better understanding of the conditions influencing corporate performance and are likely not going to subject managers to a fine for low profit not caused by their weak management.

Institutional investors are perceived to be more sophisticated and have more technical expertise to monitor managers effectively (Guan, Sheu & Chu 2007). The relationship between ISO and CSR was found to be mixed in prior disclosure studies. Some studies found a positive association between ISO and CSR (Naser & Hassan, 2013, Wang, Jiaotong, Song & Yao, 2013, and Yao, Wang & Song, 2011), while other researchers found a negative relationship (Abdullah & Fatima, 2014, Hussainey, Elsayed, & Abdel Razik, 2011, Garko 2015).

In Saudi Arabia, Habbash (2016) investigated the drivers of CSR by Saudi Arabian companies. The researcher adopted multiple regression to analyze the 267 annual reports of Saudi non-financial-listed firms for the years ended 2007 to 2011. Findings revealed that CSR practices in Saudi Arabia averaged 24% between 2007 and 2011. The results also showed that ISO has an insignificant association with the level of CSR in Saudi Arabia. One of the limitations of this study is that it concentrated on non-financial-listed firms and ignored the financial-listed firms.

In Bangladesh, Das, Dixon & Michael (2015) investigated the CSR practices of listed banks and explored the potential effects of corporate governance and company specific characteristics on CSR. Population for the study comprised 30 banks listed from both the Dhaka Stock Exchange (DSE) and the Chittagong Stock Exchange (CSE) from 2007 to 2011 out of which 29 were selected as the sample for the study. Their findings revealed that CSR has a positive and significant association with institutional share ownership. The result also showed that CSR by banks increased over the period covered by the study (from an average of 59.02% in 2007 to 76.87% in 2011).

In Nigeria, Garko (2015) examined the impact of corporate governance characteristics on voluntary disclosure of listed industrial goods companies. His study covered a period of 10 years (2004 to 2013). Population for the study comprised 23 industrial goods companies listed on the floor of Nigerian Stock Exchange out of which 13 firms were selected as the sample.

He developed a voluntary disclosures Checklist that contained 87 items. Descriptive statistics, correlation and regression analysis were used as the Data analysis techniques. His findings revealed that institutional shareholding has a negative but insignificant association with voluntary disclosure. His finding further revealed that a 61% variation in the dependent variable was caused by changes in the independent variables collectively.

In Egypt, Abdel Razek (2014) investigated the association between corporate governance and CSR by Egyptian listed companies. The researcher used a survey research design. Moreover, in order to enable him to analyze responses received from 49 relevant stakeholders (17 professional accountants and financial managers, 23 academician from Cairo University and 9 postgraduate students), he used SPSS. His findings revealed a positive and significant relationship between institutional shareholding and CSR by Egyptian companies. This study uses only primary data and ignored the use of secondary data to validate his findings.

In China, Wang, Jiaotong, Song & Yao (2013) identified the determinants of CSR using the annual reports of over 800 A-share firms listed on the Shanghai Stock Exchange. Population of the study comprised all the A-share firms listed on the Shanghai Stock Exchange (SSE) from 2008 to 2009. However, the researchers adopted a multivariate regression to measure the relationship between dependent and independent variables. Their findings revealed that CSR has a positive and significant association with institutional shareholding. Hence, based on their findings they concluded that firms in High-Profile environmentally sensitive industries tended to disclose more CSR information than those in Low-Profile environmentally sensitive industries and that the CSR by firms listed on the Shanghai Stock Exchange was still low.

In Nigeria, Farouk & Hassan (2013) made an empirical analysis of the financial and non-financial determinants of CSR of the listed Deposit Money Banks (DMB's) from 2005 to 2011. Population of the

study comprised 21 listed DMB's out of which 13 were selected as the sample. They adopted a multiple regression technique to analyze the data collected from the annual reports and accounts of the sampled banks. Their findings revealed that institutional ownership has a positive and significant association with CSR. Moreover, based on their findings they concluded that a 32% change in CSR was jointly caused by changes in the independent variables. This study uses DMB'S as the area of study, who are usually not under any pressure that will compel them to engage in CSR.

In Dhaka, Abu Sufian & Zahan (2013) examined the relationship between corporate ownership structure and CSR. Population of the study comprised 254 companies listed on the Dhaka Stock Exchange as at December 2010. Moreover, as the study was limited to only non-financial companies, the number of companies was reduced to 130. From this sample frame, 70 were selected purposively as the sample for the study. The result of multivariate regression analysis showed that institutional shareholding has a positive and significant association with CSR. This study also concentrated on only non-financial firms and ignored financial firms. Also it covers only one year (time series analysis). Therefore, OLS regression is the best regression to use as against the multivariate regression adopted by the study.

In Jordan, Al- Shubiri, Al-abadallat & Abu Orabi (2012) identified the financial and non-financial determinants of CSR. They sampled 60 industrial companies listed on the Amman Stock Exchange (ASE). Their study covered a period of five years (2006 to 2010). Their findings revealed a positive but insignificant association between CSR and institutional shareholding. Based on their findings, they concluded that large companies tend to disclose more information voluntarily than smaller companies.

In Sweden, Arshad & Vakhidulla (2011) studied the relationship between firm and industry characteristics as well as media exposure with CSR. Population of the study comprised all the Spanish firms listed on the Madrid Stock Exchange included in the IBEX35 index out of which

25 companies were selected as the sample. Their findings showed that CSRD was found to have a negative but insignificant association with institutional shareholding.

In China, Yao, Wang & Song (2011) investigated the determinants of CSRD using the annual reports of over 800 firms listed on the Shanghai Stock Exchange. Their study covered a period of only two years (2008 to 2009). A multivariate regression model was used to identify the key determinants of CSRD. They used the legitimacy theory to explain their work, because they perceived enterprise managers to be exploiting annual reports as a tool to legitimize their corporate social conduct. Their findings revealed that CSRD had positive and significant association with institutional shareholding.

In Egypt, Hussainey, Elsayed & Abdel-Razik (2011) examined the determinants of CSRD by listed companies. They sampled 111 listed companies, and their study covered a period of only 6 years (2005 to 2010). Their findings revealed that Egyptian listed companies disclosed on average 10 to 50 CSR statements in their annual reports. Their results also showed a negative but insignificant relationship between institutional shareholding and the level of CSRD.

Lecaj & Heinrich (2010) examined the extent of CSRD in Annual reports of German and Swedish Listed Corporations. Population of the study comprised 258 companies listed on the Stockholm Stock Exchange in Sweden and 300 companies listed on the Prime Standard of Frankfurt Stock Exchange in Germany (558 companies). Sample size comprised 215 companies listed on both the Stockholm and Frankfurt Stock Exchange. CSRD was measured using the GRI checklist. Regression analysis and Pearson correlation were adopted as the Data Analysis techniques. Their findings revealed that there were differences in CSRD between companies in Germany and Sweden. Their findings also showed that institutional share ownership had a positive but insignificant association with the level of CSRD practiced by listed companies in

Germany and Sweden. Based on their findings, they concluded that a 35% changes in CSRD was determined by changes in independent variables collectively.

In Sweden, Tagesson, Blank, Broberg & Collin (2009) studied the determinants of CSRD by listed corporations. Their study aimed at examining the level and determinants of CSRD. Sample size comprises 267 corporations listed on the Stockholm Stock Exchange and all state-owned corporations. Their result showed that institutional shareholding had a positive and significant association with CSRD. Moreover, it was found that state-owned companies disclosed more social information than privately owned companies.

## **2. Managerial Share Ownership and CSRD**

MSO refers to the proportion of equity shares held by the Managers / Directors of the company, who happens to be insiders, either directly or indirectly. Directors are encouraged to have their own portion of ownership in the corporation. Jensen & Meckling (1976) argued that agency conflicts between managers and shareholders may be reconciled when managers possess ownership interest in their company. Therefore, the principal-agent problem between Managers and Shareholders arises when Managers hold little equity in the corporation, which leads them to engage in non-maximizing behaviour. However, as management ownership increases the interest of managers and shareholders are more aligned (Jensen & Meckling 1976 and Watts & Zimmerman, 1981). This alignment reduces conflicts of interest and causes managers to act in the shareholders interest (Watts, 1977, Leung & Horwitz 2004). Some of the prior empirical studies show that MSO is positively associated with CSRD (Watts 1977, Leung & Horwitz 2004) while other researchers found a negative association between MSO and CSRD (Yuan & Xiao 2007 and Kelton & Yang 2008).

In Nigeria, Ali & Isa (2018) examined the impact of board attributes on corporate social responsibility disclosure of listed Cement companies from 2004 to 2014. Population of the study comprised four cement companies listed on the Nigerian exchange market as at 31<sup>st</sup> December, 2014 out of which three emerged as the sample. Data was analyzed by means of descriptive statistics, correlation and regression. Findings revealed that Managerial shareholding has negative and significant association with the level of CSR by listed cement companies.

In Nigeria, Isa & Muhammad (2015) examined the impact of board characteristics on CSR of listed food product firms from 2005 to 2014. Population of the study comprised eleven food product firms listed on the floor of the Nigerian stock exchange market out of which six firms were selected as the sample. Descriptive statistics, correlation and regression were used as data analysis techniques. Findings revealed that managerial shareholding had a negative and significant association with the level of CSR by listed food product firms.

In Bangladesh, Das, Dixon & Michael (2015) investigated the CSR practices of listed banks and explored the potential effects of corporate governance and company specific characteristics on CSR. Population for the study comprised 30 banks listed from both the Dhaka Stock Exchange (DSE) and the Chittagong Stock Exchange (CSE) from 2007 to 2011 out of which 29 were selected as the sample for the study. Their findings revealed that CSR had a positive and significant association with managerial share ownership.

In Nigeria, Garko (2015) examined the impact of corporate governance characteristics on voluntary disclosure of listed industrial goods companies. His findings revealed that MSO had a negative but insignificant association with voluntary disclosure. Again, Muhammad (2015) examined the impact of board characteristics on CSR of listed food product firms in Nigeria.

His study covered a period of 10 years (2005 to 2014). Population for the study comprised 11 food product firms listed on the floor of Nigerian Stock Exchange out of which 6 firms were selected as the sample. Descriptive statistics, correlation and regression analysis were used as data analysis techniques. His findings revealed that MSO had a negative and significant association with CSRD.

In Egypt, Abdel Razek (2014) investigated the association between corporate governance and CSRD by Egyptian listed companies. His findings revealed a positive and significant relationship between MSO and CSRD by Egyptian companies. Elsakit & Worthington (2014) investigated the impact of corporate characteristics and corporate governance upon the level and extent of CSRD in the Banking Sector. The researchers used a desk-based research approach, thereby discussing the results of some related studies and criticizing them where appropriate. Their findings confirmed the existence of a positive and significant association between MSO and the extent of CSRD.

In Malaysia, Sulaimana, Abdullah & Fatima (2014) examined the relationship between share ownership distribution, profitability, firm size and leverage with the quality of CSRD in annual reports in 2009 (i.e. two years after Malaysia made corporate social responsibility disclosure mandatory for all listed companies). 164 companies in the environmentally sensitive industries listed on the Bursa Malaysia were selected as the sample using a stratified random sampling technique. These companies were stratified by the researchers into eight industries, which were identified as being highly environmentally sensitive. These include oil and gas, chemical, metal manufacturing, plantation, cement manufacturing, property, construction and mining. The researchers also focused their attention in examining the impact of the 2006 mandatory CSR reporting requirements of Bursa Malaysia for listed companies. And they specifically divided

their study to two stages. At the first stage, they compared the quality of the CSR reporting of Malaysian listed companies between 2005 and 2009, that is, two years before and two years after CSR reporting was made mandatory. And in the second stage they investigated whether particular organizational variables such as share ownership distribution, economic performance, leverage and size, had any relationship with the quality of CSR. Their findings revealed that MSO had an insignificant positive association with the level of CSR practiced by environmentally sensitive industries.

In Abu Dhabi, Naser & Hassan (2013) investigated the extent of CSR and its determinants on companies listed on Abu Dhabi Securities Exchange. Population of the study comprised the entire 65 companies listed on Abu Dhabi Securities Exchange for the year ended 31<sup>st</sup> December, 2011 out of which 60 companies were selected as the sample. The study also adopted regression analysis to identify the factors influencing the extent of CSR in annual reports. Their findings revealed that CSR was found to have a positive but insignificant association with MSO. Based on their findings, they concluded that 40% changes in CSR of the surveyed companies was caused by changes in independent variables collectively.

In China, Wang, Jiaotong, Song & Yao (2013) examined the determinants of CSR. Their findings revealed that CSR had a positive and significant association with MSO. In Thailand, Suttipun & Stanton (2012) investigated the level of CSR in annual reports of companies listed on the Stock Exchange of Thailand (SET), thereby testing the relationship between CSR and a number of company characteristics. Population of the study comprised all the companies listed on the SET in 2007 out of which 75 companies were selected as the sample using simple random sampling technique. Their findings indicated that 62 companies (83%) of the sampled firms provided environmental information in

their annual reports. Additionally, their findings revealed that MSO has a negative but insignificant association with CSRD.

In Sweden, Arshad & Vakhidulla (2011) studied the relationship between firm and industry characteristics as well as media exposure with the level of CSRD. Their findings showed that CSRD had negative but insignificant association with MSO. In China, Yao, Wang & Song (2011) investigated the determinants of CSRD using the annual reports of over 800 firms listed on the Shanghai Stock Exchange. Their findings revealed that CSRD had a positive and significant association with MSO. In Egypt, Hussainey, Elsayed & Abdel-Razik (2011) examined the determinants of CSRD by listed companies. Their results showed a negative but insignificant relationship between MSO and the level of CSRD. In Germany and Sweeden, Lecaj & Heinrich (2010) examined the extent of CSRD in the Annual Reports of Listed Corporations. Their findings showed that MSO had a positive but an insignificant association with the level of CSRD.

### **3. Board Gender and CSRD**

In recent decades, the percentage of women managers and / or board members has gone up significantly. Several studies suggested that having more female managers and board members adds to higher levels of CSRD. Companies that encourage female leadership have higher levels of philanthropy and engage in better quality initiatives, since gender diversity also had an impact on CSRD ratings (Babcock, 2012, Soares, Marquis & Lee, 2011). Some CSRD studies found that when there was only one woman in a group of men, she could not feel free to give her opinion, but when there was at least 3 women, gender was no longer a barrier and women were free to raise issues and be active (Konrad, Kramer & Erkut, 2008). Fernandez-Feijoo, Romero & Ruiz (2012) investigated the effect of board gender composition on CSRD. They generated data from a survey conducted by KPMG and the Women on Boards Report from Governance Metrics

International. Their findings revealed that Boards with three or more women disclosed more CSR information than those with less than 3 women. Based on their findings, they concluded that board gender is positively associated with the level of CSR. Williams (2003) argued that there are differences in the company's Board of Director's decisions due to its gender composition. His findings revealed that boards with a higher number of women engage in charitable giving (CSR) to a larger extent than boards with a less number of women. Female directors are also found to have a positive association with the level of CSR in the short term (Campbell & Miguez Vera, 2010). Furthermore, Bernardi, Bosco & Vassill (2006) and Brammer, Millington & Pavelin (2009) discovered that having more women on boards enhances reputation. Also, the findings of Bear, Rahman & Post (2010) showed that the number of women board members is positively associated with the extent of CSR. In Nigeria, Isa & Muhammad (2015) examined the impact of Board Characteristics on CSR of listed food product firms from 2005 to 2014. Findings revealed that board gender has positive and significant association with the level of CSR by listed food product firms.

In Jordan, Alkayed, Omar & Roddy (2018) investigated the determinants of CSR. The study examined factors that influenced the extent and quality of CSR in annual reports. Factors such as corporate characteristics (size, gearing, firm's age and industry type), corporate governance (board size, number of meetings, nonexecutive directors, female directors in the board, family directors in the board, foreign members, audit committee composition, type of external auditors and CEO duality) and ownership structure (government ownership, institutional ownership and ownership concentration) were used as the independent variables. While the CSR index that contained environmental information, human resources, product and consumers and community involvement was developed as the dependent variable of the study. The legitimacy theory was

adopted in order to explain the relationship among the variables of the study. it covered a period of six years (2010 to 2015) and its sample size comprised 118 Jordanian listed companies. Findings revealed that board gender had a positive and significant relationship with the extent and quality of CSR. In Nigeria, Muhammad (2015) examined the impact of Board Characteristics on CSR of listed food product firms. His findings also revealed that board gender has a positive and significant association with CSR.

#### **4. Board Size and CSR**

Board size refers to the total number of executive and non-executive directors serving on the board of directors of a company at a particular period of time. Findings from several disclosure studies revealed mixed results on the association between board size and CSR. The size of the board is believed to affect its ability to monitor and evaluate management and a small board encourages faster information processing (Zahra, Neubaum & Huse 2000). Furthermore, the ability of directors to control and promote value-creating activities is more likely to increase with the increase of directors on the board. With more directors, its collective experience and expertise will increase and therefore, the need for information disclosure will be higher. Several disclosure studies revealed a positive and significant association between board size and the level of CSR in annual reports (Das, Dixon & Michael 2015, Garko 2015 and Muhammad 2015). Another study by Abu Sufian & Zahan (2013) revealed a negative but an insignificant association between board size and CSR.

In Nigeria, Ali & Isa (2018) examined the impact of board attributes on CSR of listed Cement companies from 2004 to 2014. Findings revealed that board size has a positive and significant association with the level of CSR by listed cement companies in Nigeria. Again, Isa & Muhammad (2015) examined the impact of board characteristics on CSR of listed food product

firms from 2005 to 2014. Findings revealed that board size has a positive and significant association with the level of CSR by listed food product firms in Nigeria.

In Jordan, Alkayed, Omar & Roddy (2018) investigated the determinants of CSR by Jordanian listed companies. Factors such as corporate characteristics, corporate governance and ownership structure were used as the independent variables. While the CSR index that contained environmental information, human resources, product and consumers and community involvement was developed as the dependent variable of the study. The legitimacy theory was adopted in order to explain the relationship among the variables of the study. The study covered a period of six years (2010 to 2015) and sample size comprised 118 Jordanian listed companies. Findings revealed that the extent of CSR was higher than CSR quality. Additionally, among the determinants of CSR, board size was found to have a positive and significant relationship with the extent and quality of CSR.

In Bangladesh, Das, Dixon & Michael (2015) investigated the CSR practices of listed banks and explored the potential effects of corporate governance and company specific characteristics on CSR. Population for the study comprised 30 banks listed on both the Dhaka Stock Exchange (DSE) and the Chittagong Stock Exchange (CSE) from 2007 to 2011 out of which 29 are selected as the sample for the study. Their findings revealed that CSR has a positive and significant association with Board size.

In Nigeria, Garko (2015) examined the impact of corporate governance characteristics on voluntary disclosure of listed industrial goods companies. His study covered a period of 10 years (2004 to 2013). Population for the study comprised 23 industrial goods companies listed on the floor of Nigerian Stock Exchange out of which 13 firms were selected as the sample.

He developed an 87 voluntary disclosures checklist for his study. Descriptive statistics, correlation and regression analysis were used as the data analysis techniques. His findings

revealed that board size has a positive and significant association with voluntary disclosure. Also, Muhammad (2015) examined the impact of board characteristics on CSR of listed food product firms in Nigeria. His study covered a period of 10 years (2005 to 2014). Population for the study comprised 11 food product firms listed on the floor of Nigerian Stock Exchange out of which 6 firms were selected as the sample. Descriptive statistics, correlation and regression analysis were used as the data analysis techniques. His findings revealed that board size has a positive and significant association with CSR. In Egypt, Abdel Razek (2014) investigated the association between corporate governance and CSR by listed companies. His findings revealed a positive and significant relationship between board size and CSR.

### **5. Profitability and CSR**

This is the result of business operations (profit / loss) over a given period of time, usually one year. Profitability is one of the factors that have been frequently employed in the literature to explain the extent of CSR by corporations. Company profitability gives an indication about the effectiveness of corporate management. It is very likely to see profitable companies providing detailed information in their accounts in order to highlight their management effectiveness or attract users. This means that profitable companies have positive messages to signal to the users of the accounts. Therefore, it is understandable for them to disclose more information than non-profitable ones. However, it is possible to see some companies sustaining losses and still disclosing detailed information in order to explain what went wrong and how they intend to correct it. Gitman & Zutter (2012) defined profitability as the relationship between revenues and the costs generated by using the firm's assets, both current and fixed, in productive activities. The rationale for an influence of profitability on CSR is obvious. Profitable companies have

incentives to distinguish themselves from less profitable ones in order to raise capital on the best available terms and one way to achieve this is through CSRD.

Gitman & Zutter further argued that Return on Assets "measures the overall effectiveness of management in generating profits with its available assets". A number of CSRD studies found a positive association between profitability and the level of CSRD (Juhmani, 2014, Reverte, 2009, Tagesson, Blank, Broberg & Collin, 2009). However, some researchers have found a negative relationship between profitability and the level of CSRD (Deitiana, 2015, Skouloudis, et al., 2014; Naser & Hassan, 2013). Profitability measured differently using different variables in most CSRD studies and the most widely used variables include: Return on equity (ROE) and Return on assets (ROA) (Patten, 1991, Reverte, 2009, Khemir & Baccouche, 2010).

In Nigeria, Salisu, Sani & Lawan (2018) investigated the relationship between CSRD and the financial performance of listed conglomerates firms. Population of the study comprised all of the eight conglomerates firms listed on the Nigerian Stock Exchange market throughout the period of the study. Five companies emerged as the sample after using stratified sampling technique. Data was collected from the annual reports of the sampled firms. Their study covered a period of 10 years (2007 to 2016). Data was analyzed using descriptive statistics, correlation and multivariate regression. Findings revealed that there was a significant positive association between CSRD and financial performance (proxied as ROA and ROCE). While an insignificant negative association was discovered between CSRD and financial performance (proxied as ROE).

In Sri Lanka, Aloy, Nireesh & Silva (2018) examined the relationship between CSRD and financial performance as an attempt to find out whether CSRD was linked to the financial performance of quoted companies in the Banking, Finance and Insurance sectors. Purposive

sampling method was used to select the sample from the target population. Sample size comprised 33 companies that disclosed CSR information in their annual reports throughout the period of the study. The study covered a period of only five years (2010 to 2014). Data was analyzed through the use of descriptive statistics and regression. Findings revealed that there was a significant positive association between CSR and profitability of the selected listed banks, finance and insurance companies.

In Australia, Sri Wahyuningrum & Budihardjo (2018) examined the relationship between company financial performance, company characteristics, auditing firm and the extent of CSR of listed Australian companies in 2014. Sample for the study comprised 200 largest Australian listed companies (ASX) in 2014. Descriptive statistics and regression analysis were adopted as tools of analysis. The study adopted stakeholder and legitimacy theories in order to explain the CSR practices by Australian companies. Findings showed that profitability (ROE) has positive and significant association with the level of CSR. On the other hand, profitability (ROA) was found to have an insignificant association with CSR.

In Saudi Arabia, Habbash (2016) investigated the drivers of CSR by Saudi Arabian companies. The researcher adopted multiple regression to analyze the 267 annual reports of Saudi non-financial-listed firms for the years ended 2007 to 2011. Findings revealed that Profitability has a positive but insignificant association with the level of CSR.

In New Guinea, Bandara (2016) examined the CSR among the companies listed on the Port Moresby Stock Exchange (POMSoX) in Papua New Guinea (PNG). The study covered a period of only 3 years (2011 to 2013). Population comprised 19 companies listed on the POMSoX in 2014 out of which 10 are selected as the sample (1 Gas and Petroleum Company, 3 mining companies, 2 trading companies, 1 Agro-business, 1 Airline business and 2 Banking & Finance

Companies). Findings revealed that company profitability has a positive and significant association with the level of CSR.

In Bangladesh, Das, Dixon & Michael (2015) investigated the CSR practices of listed banks and explored the potential effects of corporate governance and company specific characteristics on CSR. Population for the study comprised 30 banks listed from both the Dhaka Stock Exchange (DSE) and the Chittagong Stock Exchange (CSE) from 2007 to 2011 out of which 29 were selected as the sample. Their findings revealed that CSR has a positive but an insignificant relationship with firms' profitability.

In Nigeria, Garko (2015) examined the impact of corporate governance characteristics on the voluntary disclosure of listed industrial goods companies. His findings revealed that profitability has a positive and significant association with voluntary disclosure.

In Thailand, Wisuttorn (2015) investigated the extent of CSR by Thai public listed companies and the extent of the relationship between CSR and firm's financial performance from 2009 to 2011. A checklist of 45 CSR items was developed by the researcher in order to identify the CSR practices by Thai listed companies. Sample size comprised 323 companies listed on the Stock Exchange of Thailand (SET). The study covered a period of only 3 years (2009 to 2011). However, in addition to financial performance measures (ROA, NPM, EPS and Tobin's Q) adopted by the researcher, size, industry type, age of the firm, leverage and number of independent directors on the board were also introduced as the control variables. Four regression models, including the cross sectional model, pooled ordinary least square model, Random and fixed effect models, were used to analyze the data collected from the field. His findings revealed a positive and significant association between CSR and profitability measured as ROA.

In Saudi Arabia, Abdull Razak (2015) investigated whether certain firm characteristics were the potential determinants of the level of CSR by listed companies. Sample size comprised 166 companies listed on Tadawul Stock Exchange in 2013. Regression analysis was used as the data analysis technique. Findings

revealed that CSRD varied across companies and industries, with almost 66% of the listed companies making CSRD in their annual report. The result also showed that profitability has a positive and significant association with CSRD.

In Europe, Strouhal, Gurvitš, Nikitina-Kalamae & Startseva (2015) examined the relationship between CSRD and financial performance of companies, thereby determining the linkage between CSRD and financial performance in the Central and Eastern Europe (CEE) region (Czech Republic and Estonia). The study covered a period of only 2 years (2012 and 2013). And 15 companies listed on the Nasdaq OMX Baltic (Tallinn market) and 23 companies listed on the Prague Stock Exchange were used as the sample for the study. Their findings revealed that there was no direct relationship between CSRD and the profitability of listed companies. Moreover, their results clearly demonstrate that companies with the highest value of ROA are characterized by the absence of CSRD, while others with a high level of CSRD have low values of ROA.

In Saudi Arabia, Abdulhaq & Muhammed (2015) examined the extent of CSRD and its determinants. Sample size comprised 163 companies listed on the Saudi Stock Exchange (TADAWUL). The study covered a period of only 2 years from 2012 to 2013. Multiple regression analysis was used to identify the factors that influence the extent of CSRD by companies listed on TADAWUL. Their findings revealed that CSRD has a negative but an insignificant association with profitability (ROA).

In Brazil, Rufino & Machado (2015) conducted a study aimed to investigate the determinants of CSRD by Brazilian companies listed on the São Paulo Stock, Commodities and Futures Exchange (BM & FBOVESPA). The study covered a period of only three years from 2010 to 2012. Sample size comprised 100 companies listed on BM & FBOVESPA. Their findings revealed that there is a negative and significant association between CSRD and profitability.

Based on findings, they concluded that companies regulated by government tend to publish more CSR information than companies not regulated. Moreover, the more profitable the company is, the less likely is it to disclose CSR information. In Nigeria, Dibia & Onwuchekwa (2015) investigated the determinants of CSR by oil and gas companies. They specifically examined the effect of Firm size, Profitability, Leverage and Audit firm type on CSR using cross-sectional research design. Simple random sampling technique was used to select the sample size of 15 companies from the Nigerian oil and gas sector. The study covered a period of six years (2008 to 2013). Binary regression technique (Logit and probit) was also used as the data analysis technique. Their findings revealed that there is an insignificant positive association between Profitability and CSR.

In Indonesia, Deitiana (2015) examined the influence of profitability, leverage, growth rate, firm size, market capitalization, media exposure and ownership towards CSR by listed Indonesian companies. Purposive sampling method was used to select 16 mining companies listed on the Indonesian Stock Exchange as the sample for the study. The study also covered a period of only six years (2016 to 2012). And the researcher analyzed data collected using multiple regression and other series of post-estimation tests, such as the normality, heteroscedasticity and multicollinearity tests. The empirical evidence showed that Profitability has a negative but insignificant association with CSR.

In Malaysia, Ibrahim, Mohamad, Yunus & Norwani (2014) examined the level of CSR by consumer products and plantation industry. They also tried to explore whether size, profitability and leverage were among the factors that determined the level of CSR in Malaysia. Sample size comprised 120 consumer products and 34 plantation companies listed on Bursa Malaysia (154 companies). Their findings revealed that profitability (ROA) had an insignificant positive relationship with CSR. Based on findings, they concluded that, although many companies engaged in CSR, their disclosure was still low.

In Nigeria, Ajide, Monsuru, Aderemi & Abdul-Aziz (2014) examined the effects of CSR on bank's profitability. Sample size comprised 12 Commercial Banks listed on the Nigerian Stock Exchange (NSE) in the year 2012. Multiple regression analysis was used to analyze data obtained from the financial

statements of the sampled Banks. Their findings revealed that CSRD has a positive and significant relationship with profitability. Elsakit & Worthington (2014) investigated the impact of corporate characteristics and corporate governance upon the level and extent of CSRD in the Banking Sector. Their findings confirmed the existence of a positive and significant association between Profitability and the extent of CSRD. Again, Oluwagbemiga (2014) examined the effects of CSRD on investor decision and the financial performance of companies listed on the Nigerian Stock Exchange (NSE). The researcher analyzed 258 annual reports and accounts of the sampled companies. He adopted an exploratory design, thereby collecting primary data by administering questionnaires to relevant stakeholders (Accountants, External Auditors, Financial Analysts, Stockbrokers, Bankers, Regulators and Researchers). Purposive sampling technique was also used to identify 140 respondents to whom questionnaires were administered (20 to every category). Descriptive statistics was equally used as the data analysis technique. His findings revealed that there is a positive and significant association between CSRD and profitability.

In Malaysia, Wan Suhazeli, Mahmoud & Arkan (2014) examined the relationship between CSRD and the financial performance of Malaysian firms. They used data obtained from the corporate annual report of three firms listed on Bursa Malaysia for the period of five years (2007 to 2011). They used regression analysis to test the relationship between CSRD and financial performance. Their findings revealed that there was a positive relationship between profitability and CSRD. Again, Sulaimana, Abdullah & Fatima (2014) examined the relationship between share ownership distribution, profitability, firm size and leverage with the quality of CSRD in annual reports in 2009. Their findings revealed that profitability has an insignificant positive effect on the level of CSRD practiced by environmentally sensitive industries in Malaysia. In India, Kansal, Joshi & Batra (2014) investigated the relationship between a number of financial and non-financial corporate

characteristics and the level of CSR by top Indian listed companies. Sample size comprised the top 80 companies listed on the Bombay Stock Exchange (BSE). Their findings revealed that CSR has a positive but an insignificant association with profitability.

In Palestine, Alkababji (2014) investigated the extent and nature of social and environmental reporting in the annual reports of companies listed on the Palestine Exchange (PEX) in 2012. Population of the study comprised all of the 49 listed companies in 2012 out of which 48 were selected as the sample, after one new company that was listed on the Palestine Exchange in 2012 was discarded. Specifically, the researchers examined the relationship between CSR and its determinants. They further developed a disclosure index to measure the extent of disclosure made by companies in corporate annual reports by using the Global Reporting Initiative (GRI-G3). Their major findings revealed that the level of CSR by Palestine corporations was fairly low and that an insignificant positive relationship existed between profitability and the level of CSR.

In Greece, Skouloudis, et al. (2014) investigated the status of CSR practices of the top 100 companies operating in Greece. A number of determinants, which potentially drove Greek firms to publicly disclose such information was examined and the sample used for the study consisted of the 100 largest companies operating in Greece (based on their annual revenues). They used regression analysis in order to explore the CSR trends of Greek firms and their association with various determinants. Their findings revealed a negative but an insignificant association between Profitability (ROA) and the level of CSR. Moreover, based on their findings they concluded that the 54% change in CSR was caused by changes in the independent variables.

In Bahrain, Juhmani (2014) investigated the level of corporate social responsibility disclosure practices in the websites of companies listed on Bahrain Bourse. He also tried to determine the

influence of firm size, profitability, financial leverage, firm age and audit firm size on the level of CSR. Population for the study comprised 48 companies listed on Bahrain Bourse out of which 33 were selected as the sample. Pearson correlation, Descriptive statistics and multiple regressions analysis were used by the researcher as the techniques of data Analysis. Findings indicated that 57.57% of the sampled companies provided CSR information in their 2012 annual reports on their websites. The results also showed that profitability was found to have a positive but an insignificant relationship with the level of CSR. Moreover, based on their findings they concluded that 16.4% variation in the level of CSR was caused by the changes in independent variables collectively.

In Abu Dhabi, Naser & Hassan (2013) measured the extent of CSR and its determinants on companies listed on Abu Dhabi Securities Exchange. Their findings revealed a negative and significant association between CSR and profitability. In Nigeria, Farouk & Hassan (2013) made an empirical analysis of the financial and non-financial determinants of CSR of the listed Deposit Money Banks (DMB's) from 2005 to 2011. Their findings revealed that profitability has positive and significant association with CSR. Again, Ebiringa, Yadirichukwu, Chigbu & Obi (2013) examined the effect of firm size and profitability on the extent of CSR by Oil and Gas firms. Sample size comprised 20 Oil and Gas companies listed on the Nigerian stock exchange (NSE) market selected using the simple random sampling technique. The study covered only one financial year (2011). The ordinary least squares regression technique was used to analyze data for the study. Their findings showed that Profitability has a positive and significant relationship with CSR.

In India, Makori & Jagongo (2013) examined the relationship between CSR and profitability of the selected Indian firms. They adopted simple random sampling technique to select 14

companies listed on the Bombay Stock Exchange as the sample size. Data was analyzed using multiple regression analysis. Their findings revealed a negative and significant relationship between CSRD and Return on Capital Employed (ROCE). Again, Govindarajan & Amilan (2013) examined the level of CSR initiatives taken by the Indian companies and its influence on the performance of such companies. The oil and gas industry was considered as one of the highly polluting industries. Therefore, the researchers selected 12 companies from Oil and Gas industry listed on the Bombay stock exchange (BSE) 200 Index as sample. Their study covered a period of only 4 years (2007 to 2010). They used one way Anova, Chi-Square, Karl Pearson's correlation and curve estimation regression as the Data analysis techniques. Their findings revealed that CSRD had positive and significant association with profitability.

In Indonesia, Setyorini & Ishak (2012) examined CSRD based on the Positive Accounting Theory perspective. Population for the study comprised approximately 336 to 398 companies listed on the Indonesian Stock Exchange from 2005 to 2009 (1,857 observations) out of which 911 observations were used as the sample for the study using purposive sampling method. A combination of Clarkson' Environmental Index 2007 and Sutantoputra' social index 2009 were used by the researchers to measure the level of social and environmental disclosure. The results of multivariate regression analysis showed that there exist a positive and significant association between profitability (ROA) and the level of CSRD by Indonesian companies.

In Nigeria, Uwuigbe & Egbide (2012) investigated the relationship between firms' corporate financial performance and leverage with the level of CSRD. Their study covered only one year (2008). Sample size comprised 41 firms listed on the Nigerian Stock Exchange (NSE) in 2008. In order to measure the extent of CSRD in the Annual reports, they developed a CSRD index that contained 28 items. Multiple regression analysis and Pearson correlation were employed as data analysis techniques. Their findings revealed that profitability had a positive and significant

relationship with CSR. Furthermore, their results showed that 59% of the variation in the CSR was caused by the changes in independent variables collectively.

In Saudi Arabia, Macarulla & Talalweh (2012) examined the level of CSR and the factors that determined it. 134 firms listed on the Riyadh Stock Exchange were selected as the sample. They developed a General Index to quantify the disclosure level in the labor, social and environmental categories. Their findings revealed that the level of CSR by firms listed on the Riyadh Stock Exchange was very low. Their findings also revealed a positive and significant relationship between profitability and CSR.

In Thailand, Suttipun & Stanton (2012) investigated the extent and content of CSR by companies listed on the Stock Exchange of Thailand (SET) in 2007. Their findings revealed that profitability has a negative but insignificant association with the level of CSR. In Malaysia, Yee, Yen, Kian, Von & Keong (2012) investigated factors affecting CSR among Malaysian companies in Kuala Lumpur Stock Exchange (KLSE). Population of the study comprised 954 public listed companies in KLSE out of which 210 were selected as the sample using simple random sampling technique. The study covered a period of only one year (2010). They used stakeholder and legitimacy theories to support the model of their study. Their findings revealed that 19.8% changes in CSR by Malaysian companies were caused by the changes in independent variables collectively. Their result also showed that profitability has an insignificant association with CSR.

In Sweden, Arshad & Vakhidulla (2011) studied the relationship between firm and industry characteristics as well as media exposure with CSR. Their findings showed that profitability has a positive but insignificant relationship with CSR. In Egypt, Hussainey, Elsayed & Abdel-Razik (2011) examined the determinants of CSR by Egyptian listed companies. Their findings revealed that profitability has positive and significant association with CSR.

In Greece, Galani, Gravas & Stavropoulos (2011) investigated the level of CSR in annual reports. Population of the study comprised 100 biggest Greek companies based on the ICAP list of top 500 Greek companies out of which 34 were selected as the sample. The study covered a period of only one year (2009). They adopted multiple regression as the data analysis technique. Their findings revealed that CSR practiced by Greek firms is still low, as the level of CSR by the sampled firms was only 35% during the period covered by the study. Their results also showed that profitability has an insignificant negative association with CSR practiced by Greek firms.

In Germany and Sweden, Lecaj & Heinrich (2010) examined the extent of CSR in Annual reports of Listed Corporations. Their findings showed that profitability has a positive but an insignificant association with the level of CSR. In the U.S.A., Abdul Razeed (2010) examined the determinants of CSR of companies listed on the New York Stock Exchange (NYSE) in the fiscal years 2000, 2004 and 2008. These resource companies were chosen on the basis of their operations having a potential impact on the environment. Sample size comprised 102 of the Fortune 500 companies from the three environmentally sensitive resource industries of chemical, mining and petroleum and energy and utilities. His findings indicated that US resource companies favor the Internet over hard copy annual reports for dissemination of CSR information. His findings also showed that profitability has a positive and significant relationship with CSR.

In Spain, Echave & Bhati (2010) examined the activities of Spanish companies in their CSR practices and the potential determinants of CSR by Spanish corporations. They also investigated the extent to which annual reports of Spanish companies reflect the current trends in CSR reporting by corporations across the world. Sample size comprised 41 companies out of

which 24 were listed on the IBEX 35 Stock Market, 15 on the IBEX Mercado Continuo Stock Market and 2 are unlisted. They found that there was no significant association between profitability and the level of CSD practiced by Spanish firms. Moreover, the result showed that Spanish firms disclosed most information on governance followed by products and services. And that CSRD by Spanish firms was influenced by government regulations.

In Spain, Reverte (2009) examined whether a number of firm industry characteristics were potential determinants of CSRD practiced by Spanish listed firms. His study covered a period of only 2 years (2005 and 2006). Sample size comprised 46 Spanish firms listed on the Madrid Stock Exchange (MSE). His findings showed that profitability has a positive but an insignificant relationship with CSRD. In Sweden, Tagesson, Blank, Broberg & Collin (2009) studied the determinants of CSRD by Swedish Listed Corporations. Their result showed that profitability has a positive and significant relationship with the level of CSRD. Ho & Taylor (2007) examined the influence of corporate characteristics on CSRD. Findings showed that profitability has a negative and significant association with CSRD.

### **Liquidity and CSRD**

Companies with high liquidity ratios are more likely to make any costly decision than those with low liquidity ratios (Hussainey, Elsayed & Abdel-Razik, 2011). Prior empirical studies offered mixed results on the association between liquidity and CSRD. Abd-El Salam & Weetman (2003) argued that high liquidity Egyptian firms are more likely to report more CSR information in order to distinguish their companies from low liquidity firms. In the same vein, Samaha & Dahawy (2011) also argued that companies with low liquidity ratio may publish more CSR information in their annual reports than low liquidity firms in order to satisfy the information requirements of stakeholders. Moreover, several CSRD studies found a positive and significant

association between liquidity and the level of CSR (Ezat & El-Masry, 2008; Samaha & Dahawy, 2010). On the other hand, some CSR studies found a negative association between liquidity and CSR (Aly, Simon & Hussainey, 2010, Samaha & Dahawy, 2011). Some of the aforementioned CSR studies defined liquidity as the ratio of current assets to current liabilities. In Egypt, Hussainey, Elsayed & Abdel-Razik (2011) examined the determinants of CSR by Egyptian listed companies. Their results showed that liquidity has a negative but an insignificant relationship with the level of CSR. Ho & Taylor (2007) examined the influence of corporate characteristics on CSR. Their findings showed that liquidity has a negative and significant association with CSR.

## **6. Earnings per Share and CSR**

Previous studies on the determinants of CSR pointed out the possible association between EPS and the level of CSR by corporations. A study by Wisuttorn (2015) argued that EPS has a negative but an insignificant association with CSR. In Australia, Sri Wahyuningrum & Budihardjo (2018) examined the relationship between company financial performance, company characteristics and the extent of CSR of listed Australian companies in 2014. Findings showed that EPS had a positive and significant association with the level of CSR.

In Thailand, Wisuttorn (2015) investigated the extent of CSR by Thai public listed companies and the extent of the relationship between CSR and firm's financial performance from 2009 to 2011. His findings revealed that EPS has a negative but an insignificant association with the level of CSR.

In India, Makori & Jagongo (2013) examined the relationship between CSR and the profitability of the selected Indian firms. Their findings revealed a negative and significant relationship between CSR and EPS. Again, Govindarajan & Amilan (2013) examined the level

of CSRD by Indian companies and its influence on the performance of such companies. Their findings revealed that CSRD has a positive and significant association with EPS.

### **7. Leverage and CSRD**

In Sri Lanka, Aloy, Nireesh & Silva, (2018) examined the relationship between CSRD and financial performance, as an attempt to find out whether CSRD is linked to financial performance of quoted companies in the Banking, Finance and Insurance sectors. Purposive sampling method was used to select sample from the target population; sample size comprised 33 companies that disclosed CSR information in their annual reports throughout the period of the study. The study covered a period of only five years (2010 to 2014). Data was analyzed through the use of descriptive statistics and regression. Findings revealed an insignificant negative association between leverage and CSRD.

In Saudi Arabia, Habbash (2016) investigated the drivers of CSRD by Saudi Arabian companies. The researcher adopted multiple regression to analyze the 267 annual reports of Saudi non-financial-listed firms for the years ended 2007 to 2011. Findings revealed that CSRD practiced in Saudi Arabia averaged 24% between 2007 and 2011. The results also showed that leverage has a positive but an insignificant association with the level of CSRD.

In Thailand, Wisuttorn (2015) investigated the extent of CSRD by Thai public listed companies and the extent of the relationship between CSRD and firm's financial performance from 2009 to 2011. His findings revealed that leverage was found to have a negative but an insignificant association with the level of CSRD. In Saudi Arabia, Abdulhaq & Muhammed (2015) examined the extent of CSRD and its determinants. Their findings revealed that CSRD has a negative and significant association with leverage. In Brazil, Rufino & Machado (2015) conducted a study aimed to investigate the determinants of CSRD by Brazilian companies listed on the São Paulo

Stock and Commodities and Futures Exchange (BM & FBOVESPA). The study covered a period of only three years (2010 to 2012). Their findings revealed an insignificant positive association between CSR and leverage.

In Nigeria, Dibia & Onwuchekwa (2015) investigated the determinants of CSR by oil and gas companies. Their findings revealed a negative but an insignificant association between leverage and the level of CSR. In Indonesia, Deitiana (2015) examined the influence of profitability, leveraged, growth rate, firm size, market capitalization, media exposure and ownership structure towards CSR by listed Indonesian companies. The empirical evidence showed that leverage has an insignificant negative association with CSR. In Malaysia, Ibrahim, Mohamad, Yunus & Norwani, (2014) examined the level of CSR by consumer products and plantation industry. They also tried to explore whether size, profitability and leverage were among the factors that determined the level of CSR. Their findings revealed a positive but an insignificant association between CSR and leverage.

In Malaysia, Sulaimana, Abdullah & Fatima (2014) examined the relationship between share ownership distribution, profitability, firm size and leverage with the level of CSR in annual reports in 2009. Their findings revealed a significant positive association between leverage and the level of CSR. In Bahrain, Juhmani (2014) investigated the level of CSR practices in the websites of companies listed on Bahrain Bourse. Findings showed that financial leverage has a positive and significant association with the level of CSR. In Nigeria, Farouk & Hassan (2013) made an empirical analysis of the financial and non-financial determinants of CSR of the listed Deposit Money Banks (DMB's) from 2005 to 2011. Their findings revealed that leverage has a positive and significant association with CSR. Moreover, based on their findings, they concluded that 32% change in CSR was caused by changes in the independent variables jointly. In Indonesia, Setyorini &

Ishak, (2012) examined CSR in Indonesia based on the positive accounting theory perspective from 2005 to 2009. Their findings revealed a negative but an insignificant association between leverage and the level of CSR by listed companies.

In Nigeria, Uwuigbe & Egbide (2012) investigated the relationship between firms' corporate financial performance and leverage with the level of CSR. Their findings revealed a negative and significant relationship between leverage and CSR. In Jordan, Al-shubiri, Al-abedallat & Abu Orabi (2012) identified the financial and non-financial determinants of CSR. Their findings showed that leverage has a negative and significant association with CSR. In Germany and Sweden, Lecaj & Heinrich (2010) examined the extent of CSR in Annual reports of Listed Corporations. Their findings showed that leverage has a negative but insignificant association with CSR.

In Spain, Echave & Bhati (2010) examined the activities of Spanish companies in their CSR practices and the potential determinants of CSR by Spanish corporations. They found that there is no significant association between leverage and CSR practiced by Spanish firms. In Tunisia, Khemir & Baccouche (2010) assessed the extent and determinants of CSR in the annual reports of listed Tunisian firms. 23 listed companies were used as the sample. Data was collected from the annual reports of the selected companies for the period covered by the study (2001 to 2004). Multiple regression was used as a tool of analysis. Their findings showed that leverage has positive and significant association with CSR. In Spain, Reverte (2009) examined whether a number of firm industry characteristics were potential determinants of CSR practiced by Spanish listed firms. His findings showed that leverage has an insignificant positive relationship with CSR practiced by Spanish listed firms.

In Malaysia, Ahmad, Hassan & Mohammad (2003) examined the effect of size, leverage, profitability, industry type, auditor type and effective tax rate on the level of CSR by listed

companies. Their findings revealed that leverage has a positive and significant association with CSRD.

Most of the studies discussed tried to establish a relationship between certain firm characteristics and the level of CSRD by corporations in both developed and emerging economies. And the most prominent data analysis technique adopted by the researchers in most of the CSRD studies is multiple regression analysis. Moreover, the most common explanatory variables (determinants) they adopted in most of these studies included but were not limited to Firm Size (Political Visibility) (Deitiana, 2015, Naser & Hassan, 2013; Wang, Jiaotong, Song & Yao, 2013; AL-Shubiri, AL-abedallat & Abu Orabi, 2012; Khemir & Baccouche, 2010), Profitability (Financial Performance) (Naser & Hassan, 2013, Ebiringa, Yadirichukwu, Chigbu & Obi, 2013; Rahayu Abdull Razak, 2013; Age of the Firm Wang, Jiaotong, Song & Yao, 2013, AL-Shubiri, AL-abedallat & Abu Orabi, 2012), Board Characteristics (Muhammad, 2015, Deitiana, 2015; Das, Dixon & Michael, 2015); Leverage (Juhmani, 2014, Farouk & Hassan, 2013; Abdullah & Fatima, 2014; Khemir & Baccouche, 2010); Audit firm type (Juhmani, 2014, Naser & Hassan, 2013); Media Exposure (Deitiana, 2015; Wang, Jiaotong, Song & Yao, 2013; Reverte, 2009; Arshad and Vakhidulla, 2011); Ownership Structure (Farouk and Hassan, 2013, Wisuttorn, 2015; Yao, Wang & Song, 2011; Das, Dixon & Michael, 2015). However, some of these researchers conducted their studies for a period of only one year (Uwuike, and Egbide, 2012, Ebiringa, Yadirichukwu, Chigbu, and Obi, 2013) that covered 2008 and 2011 respectively, while others examined more than a year (Farouk and Hassan) seven years (2005 to 2011) and ten years (2001 to 2010) respectively. These CSRD studies are also found to have adopted a different number of CSRD checklist items (measurement of CSRD) that represent the dependent variable of the studies.

Ultimately, the researchers have different views at the end of their respective studies, as they come up with divergent findings on the direction and extent of relationship between factors influencing CSR (Determinants) and the level of CSR practices by corporations. This inconsistency among them may be realistic due to the fact that the circumstances under which each of these studies were conducted significantly differed. Additionally, Wallace, Naser & Mora (1994) argued that the peculiarities associated with each study, such as the type and number of firms included in the sample, the number of items included in the disclosure index (that represent the dependent variable) the independent variables as well as the controlled variables used in the study, the different methodology adopted by the researchers and the country where each study was conducted are the factors that jointly or severally contribute to the divergent findings (mixed results) from similar studies. Therefore, these facts lay the foundation for this study aimed at investigating the determinants of CSR by listed oil & gas marketing companies in the Nigeria.

## **2.4 Theoretical Framework**

The empirical studies related to CSR have developed a very diverse academic literature/ which includes different theoretical perspectives that support the corporate social reporting. Among all these theories, the agency theory, legitimacy and stakeholder theories are considered to be the most prominent (Reverte, 2009).

### **2.4.1. The Agency Theory**

This theory views the firm as an interconnection of contracts between different economic agents. In this case, environmental and social disclosure can be used for the determination of managerial compensation contracts, debt contractual obligations or implicit political costs. This theory has become an attractive proposal as a justification for the CSR (Belkaoui and Karpik, 1989). The

theory in CSR perspective states that managers will voluntarily disclose information only when there will be more benefits than costs associated with disclosing such information. Agency costs occur when managers act in their own interests rather than protect shareholder interests. Since the managers bear these agency costs, they want to be viewed as protecting shareholders' interests (Jensen and Meckling, 1976). One of the means through which they show that is the annual, sustainability and other reports. By means of these reports, managers can give proper information to shareholders and signal that they protect their interests (Watts, 1977).

Some determinants of CSR can also be explained by the agency theory, as it explains why management disclose information on voluntarily basis. It can reduce agency costs by providing information. According to the agency theory, agency costs such as the costs of monitoring and contracts, can differ because of various corporate characteristics, such as size and the leverage (Watts & Zimmerman, (1978). They further argued that accounting choices made by management are based on their own self-interest. Since the management knows that shareholders try to control them by means of monitoring and contracting, they use incentives to convince them that they are acting in their best interests. Watson et al. (2002) argued that one way of assuring shareholders that their interests are being protected is by providing them with more information about the business. A number of factors are considered to influence the level of CSR and they include ownership structure, profitability, size, industry, and leverage. Many studies found a positive and significant relationship between size and the extent of CSR in the Accounts (Broberg et al., 2010). According to the agency theory, agency costs tend to rise in line with the share of the external capital (Jensen & Meckling, 1976) and the share is most likely to be high in large corporations. In order to reduce information asymmetry and agency costs, the management will disclose more information (Adrem, 1999).

High leverage increases agency costs, because debt suppliers can protect their interests by various types of contracts and agreements. By providing more information, management can decrease the agency costs and the uncertainty for creditors and investors (Jensen & Meckling, 1976). Researches showed that corporations with high leverage have a tendency to provide more information than the corporations with low leverage (Broberg et al., 2010).

Industry type or sensitivity can have an influence on the corporations' decisions to voluntarily disclose information. Based on the agency theory, the relationship between the industry and CSRD level can be explained by the fact that companies from the highly regulated industries will be motivated to disclose more information in order to decrease agency costs in terms of the costs of abiding by the legislation (Broberg et al., 2010).

However, many studies conducted by renowned researchers like Gray, Reverte; Deegan; Parker and Patten that are related to CSRD revealed that the agency theory has little to offer for the understanding of the firms' behavior related to the social disclosure for various reasons. It proves that positive accounting theorists couldn't provide any substantive evidence to support the view that companies' management use the social disclosures in annual and other reports in the aim of their own wealth maximization (Broberg et al., 2010).

#### **2.4.2. The Legitimacy Theory**

This theory provides a more advanced perspective on the CSRD, because it considers businesses as they are bound by the social contract in which it states that the firms hold to perform different desired actions for the society in return for rewards and that their objectives will be approved and consequently guarantee the firm's continued existence (Brown & Deegan, 1998; Deegan, 2002; Guthrie & Parker, 1989). Additionally, Gray et al. (1995) and Hooghiemstra (2000) opined that CSRD comes up from the use of the theoretical framework, which poses that social and

environmental disclosure is a way to allow a firm to exist on a continued basis. Another insight related to the legitimacy theory is that firms should operate within some institutional constraints. If they fail to follow and accept institutionalized norms, then it can threaten their resources, legitimacy and consequently, existence (DiMaggio & Powell, 1983).

There are a lot of previous studies on corporate disclosure, which provide the evidence that firms disclose the information in their annual reports on a voluntarily basis as a strategy to manage the legitimacy in a right way (Campbell, 2000; Deegan & Rankin, 1996). Briefly, the CSRD can be seen as an image or symbol that the firm expresses to the outside world to manage its economic or political position (Neu et al., 1998). The Legitimacy Theory contains arguments for a positive size-disclosure relationship. It claims that larger corporation's undertake more activities, have a greater impact on the society, have more shareholders who are likely to be concerned with the social programmes undertaken by the corporation. One of the efficient ways of communicating such information is the disclosures in annual, sustainability and other reports (Cowen et al., 1987).

Certain industry attributes can influence the corporations' decisions to voluntarily disclose information. The legitimacy theory is more appropriate when explaining the relationship between industry and the disclosure level. Based on the legitimacy theory, this relationship can be explained by the fact that companies which belong to highly regulated industries will disclose more information in order to decrease the costs related to not abiding by legislation and laws (Broberg et al., 2010). Profitability from the legitimacy theory perspective can be regarded as negatively or positively related to the CSRD. As profitable corporations are more exposed to public scrutiny and political pressure, they will disclose more in order to avoid regulation and satisfy societal needs. Firm size is also examined in the view of the legitimacy theory. The firm's

visibility is raised by the total amount of its assets or turnover, which leads to a higher public attention. It shows the positive relationship between the size of a firm and disclosure. The higher the size of a corporation, the more it will be disclosing information (Reverte, 2009).

### **2.4.3. The Stakeholder Theory**

This theory claims that “the 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. The more powerful the stakeholders, the more the company must adapt. Hence, social disclosure is seen as part of the dialogue between the company and its stakeholders” (Gray et al., 1995, p.53). Friedman (1962) defined “stakeholder” as the “principle shareholder”. Roberts (1992) modified the definition of “stakeholder”, thereby including different interested groups and political parties. Currently, a broader definition that incorporates suppliers, customers, public media, local communities and non-governmental-organizations is more popular. All these stakeholders have some power to influence corporations. The stakeholder theory takes into account the impact of different stakeholders on corporate disclosure policies. From the managerial perspective of the stakeholder theory, corporate disclosure is an efficient management tool for managing the informational needs of different stakeholders. Gray et al. (1996) stated that managers can manipulate or manage stakeholders using information in the sake of gaining their support, which is necessary for the continuous existence of the firm. In the same vein, Gray et al. (1987) argued that the stakeholder theory has some limitations because it only focuses on the way a corporation responds to its stakeholders. Managers need to identify the concerns of stakeholders to choose the level of the attention they should pay to them. This approach of allocating resources determines the level and type of CSRD at a specific time. Moreover, the stakeholder theory disregards the social elements and the important influences,

such as regulations, which contain the requirements for information disclosure and statute law (Gray et al.).

Regarding the factors that influence the CSR, the stakeholder theory supports political visibility (size) and the CSR relationship. It holds that large firms have a higher effect on the society, as they have a bigger group of the stakeholders that can influence their operations (Hackston & Milne, 1996). Hence, the CSR by corporations can be attributed to avoiding regulations and / or satisfying the informational needs of various stakeholders. Industry sensitivity from the stakeholder theory perspective can be explained in the following way. Companies which belong to more sensitive industries are expected to be subject to significantly high stakeholder pressure relating to their environmental performance. It means that corporations will be expected to disclose more information. There are some studies which suppose a positive relationship between the social disclosure and profitability (Belkaoui & Karpik, 1989). The main explanation of this relationship is the management's knowledge. A management, which knows how to make a corporation profitable, understands the need of social responsibility, which tends to higher social and environmental disclosures.

Comparing the legitimacy theory with the stakeholder theory, the stakeholder theory provides a more sophisticated resolution, because it considers various stakeholders, whereas the legitimacy theory views the expectations of the society in its entirety. Particularly, the stakeholder theory claimed that various stakeholders will have different visions about the way organizations should run their activities. That is why organisations usually entered different social contracts with its various stakeholders (Reverte, 2009).

In conclusion, it can be deduced that, even though these theories have some similarities. They differ on the basis of the assumptions they are made. Not similar to the agency or positive

accounting theory, the stakeholder and the legitimacy theories don't make any assumptions of wealth-maximizing individuals, who operate in the efficient capital markets. From another perspective, Woodward et al. (1996) claimed that both stakeholder and the legitimacy theories consider organizations as being part of the wide social system. Legitimacy theory look at the society as a whole, while the stakeholder theory realizes that some groups in the society have more power than others. The legitimacy and stakeholder theories seem to be the most successful theories in explaining the extent and content of corporate social and environmental reporting. Therefore, based on these theories, social disclosure is used in order to protect the corporations' identity and reputation (Reverte, 2009). Both Adrem (1999) and Cormier et al. (2005) argued that disclosure cannot be explained by using a single theory. Additionally, Gray et al. (1995) opined that it is better to look at theories on a complimentary basis rather than competing with one another. This shows that all of the aforementioned theories should be considered as not competing, but complementing each other as alternative ways of studying and understanding organizational decisions to disclose CSR information to the society. Therefore, it is based on these facts that agency, stakeholder and legitimacy theories are used to underpin this study.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This research aims at investigating the determinants of CSRD of the Nigerian listed oil and gas marketing companies. Thus, this chapter focuses on how the study achieves the research objectives, the data collection methods and the technique of data analysis. The essence is to provide sound empirical framework for data analysis in chapter four. It also explains the research design and other methodological issues involved in this study. Population as well as the sample size of the study has been presented. Lastly, the dependent and the explanatory variables were also presented and their measurements explained.

#### **3.2 Research Design**

For the purpose of this study, an ex-post facto research design was adopted, where documentary data was collected from secondary sources. Thus, the study data was obtained from annual reports and accounts of the sampled companies for the period of twelve years (2006 - 2017). The use of twelve year period ending 2017 was in order to update the study data with the most recent information whenever additional sets of financial statements of the sampled firms were made available to the general public.

#### **3.3 Population of the study**

Population of this study comprises all the twelve (12) Oil and Gas marketing companies that are listed in the Nigerian stock exchange market from 31<sup>st</sup> December, 2006 to 31<sup>st</sup> December, 2017, as shown in Table 3.1:

**Table 3.1 Population of the Study**

S/N	Company Name	Years of Listing
1	Afroil, Plc.	1990
2	Beco Petroleum, Plc.	2009
3	Conoil, Plc.	1989
4	Capital Oil, plc.	2013
5	Eterna Oil & Gas Co., Plc.	1998
6	Forte Oil, Plc.	1978
7	Japaul Oil, Plc.	2005
8	Mobil Oil Nig., Plc.	1978
9	MRS Oil Nig., Plc.	1978
10	Oando, Plc.	1992
11	Seplat Oil Development Company	2014
12	Total Nig., Plc.	1978

SOURCE: NSE Fact book 2018.

### 3.4 Sample Size and Sampling Technique

Census sampling technique was used to select the sample size. Therefore, for any Company to be part of the sample, it must be quoted in the Nigerian Stock Exchange market throughout the period of the study (1<sup>st</sup> January, 2006 to 31<sup>st</sup> December, 2017). Beco Petroleum Product, Plc, Capita Oil, Plc and Seplat Petroleum Development Company were listed in 2009, 2013 and 2014 respectively. However, Afroil, plc was delisted in 2008. Hence, upon applying these criteria, eight (8) companies emerged as sample for the study as shown in Table 3.2.

**Table 3.2 Sample for the Study**

S/N	Company name	Years of Listing
1	Conoil, Plc.	1989
2	Eterna Oil & Gas Co., Plc.	1998
3	Forte Oil, Plc.	1978
4	Japaul Oil, Plc.	2005
5	Mobil Oil Nigeria, Plc.	1978
6	MRS Oil Nigeria, Plc.	1978
7	Oando, Plc.	1992
8	Total Nig., Plc.	1978

SOURCE: Generated from Table 3.1

### **3.5 Sources and Methods of Data Collection**

This study is based on data collected from secondary sources and data for the variables of the study was extracted from the annual audited reports and accounts of the sampled companies for the period of the study. Thus, data for both dependent and explanatory variables was extracted from annual reports and accounts of the sampled companies. The adoption of this method is informed by the fact that all the data in respect of the variables of the study are obtainable from their respective audited financial statements. Additionally, similar studies, such as Muhammad (2015) and Garko (2015) adopted this method.

### **3.6 Variables of the Study and their Measurement**

The variables used in this study comprised dependent and explanatory variables.

#### **3.6.1 The Dependent Variable**

The dependent variable for this study is the corporate social responsibility disclosure index (CSRDI). To assess the extent of CSRDI in annual reports and accounts, content analysis was employed. Accordingly, a checklist of thirty seven (37) CSRDI items was developed for the study after reviewing some of the CSRDI checklists used in previous studies (Abu Sufian & Zahan, 2013, Yao, Wang & Song, 2011 and Rufino & Machado, 2015). **(See Appendix II).**

In order to develop the CSRDI checklist for the study, the whole of 15 CSRDI checklist items used by Muhammad (2015) were adopted, 20 out of 40 CSRDI checklist items used by Abu-Sufian and Zahan, (2013) were adapted, 14 out of 20 CSRDI checklist items used by Yao, Wang and Song (2011) were also adapted, 20 out of 40 CSRDI checklist items used by Rufino and Machado (2015) were also adapted. It should be noted, however, that about 14 CSRDI checklist items adopted for the study are common in the aforementioned studies.

Moreover, CSRD was measured as the ratio of actual items disclosed in annual reports to total disclosure items included in the checklist and a dichotomous approach was used, whereby a company was awarded one (1) if an item included in the checklist is disclosed in its annual reports and zero (0) if otherwise, as used by Muhammad (2015), Garko (2015) and Abu Sufian & Zahan (2013).

### **3.6.2 Explanatory variables**

The explanatory variables consisted independent and controlled variables:

#### **A. Independent Variables:**

The independent variables comprised ownership structure (proxied as institutional share ownership and managerial share ownership), Board characteristics (proxied as Board gender and Board size) and financial performance (proxied as profitability, liquidity, EPS and leverage). These variables and their measurement are shown in Table 3.4

#### **B. Controlled Variables:**

The controlled variables comprised size and age. The decision to adopt them in the model of the study was informed by the fact that similar CSRD studies earlier reviewed found a significant association between size and age with the level of CSRD.

##### **1. Size**

Firm size is one of the main corporate characteristics that have been found to influence the level of CSRD (Cooke, 1992 as cited in Garko, 2015). Larger firms are more politically visible and thus expected to engage more heavily in legitimizing their activities. Size of the company is the scale that is used to classify the scope of the business entity (Ross & Jaffe, 2009). The company

can be viewed as large, medium or small in terms of the value of its equity (market capitalization), the volume of its sales or the value of its total assets. Therefore, the size of the company may affect the decision to disclose CSR information in financial statements. Large companies usually have greater impact on the community, get more attention from the public and hence are under pressure to voluntarily disclose more information. Additionally, large companies are more likely to be involved in activities that require disclosure more than small companies, as they are also being closely monitored by stock market regulators. Several studies on CSRD have found a positive association between size and the level of CSRD (Deitiana, 2015, Skouloudis, et al, 2014, Naser & Hassan, 2013 and Reverte, 2009). On the other hand, some studies on the determinants of CSRD revealed a negative association between size and the level of CSRD (Juhmani, 2014, Kansal, Joshi & Batra, 2014 and Dibia & Onwuchekwa, 2015). Researchers measured size using different variables in most of the CSRD studies, which include total assets and market capitalization (Hackston & Milne, 1996), sales (Belkaoui & Karpik, 1989), logarithm of Total assets and logarithm of sales (Khemir & Baccouche, 2010).

## **2. Age**

Company's societal existence depends largely on the acceptance of the society where it operates. Therefore, older companies with longer societal existence are believed to have a more established reputation, which would in turn make them more likely to report their CSR activities than newer firms. As the company operates longer, there will be more communication needed to the outside community. This provides companies with wide social networks, affecting their public image (Yang, 2009). Previous studies support the significant association between the age of the firm and CSRD (Roberts, 1992; Yang, 2009, Juhmani, 2014, Al-Shubiri and Al-abedallat & Abu Orabi, 2012). Therefore, it might be expected that

the longer a company has been listed on the Stock Exchange, the more likely it will disclose CSR information. On the other hand, some studies on the determinants of CSRD revealed a negative association between age and the level of CSRD (Wang, Jiaotong, Song & Yao, 2013, Yao, Wang & Song, 2011, Das, Dixon & Michael 2015). Age is measured as the number of years from when firms are listed on the stock exchange to the reporting year(s) in most of the CSRD studies (Khemir & Baccouche 2010, Patten, 1991;).

. These controlled variables and their measurement are also shown in Table 3.4

**Table 3.4 Variables and their Operationalization.**

<b>Variables</b>	<b>Operationalization</b>
<b>Dependent Variable</b>	
CSRD	Ratio of actual number of items disclosed to total disclosure items as used by Garko (2015) and Muhammad (2015)
<b>Independent Variables</b>	
Institutional share ownership (ISO)	Proportion of ordinary shares owned by institutions to the total number of ordinary shares issued by the company as used by Garko (2015), Naser & Hassan (2013) and Khemir & Baccouche (2010)
Managerial share ownership (MSO)	Proportion of ordinary shares owned by directors to the total number of ordinary shares issued by the company as used by Leung & Horwitz (2004) and Watts (1977)
Board gender (BG)	Ratio of female directors to total number of directors as used by Bear, Rahman & Post (2010) and Williams (2003)
Board Size (BS)	Number of directors on Board as used by Garko (2015)
Profitability (ROA)	Ratio of profit before tax to total assets as used by Khemir & Baccouche (2010), Reverte (2009) and Patten (1991)
Liquidity (LIQ)	Ratio of current assets to current liabilities as used by Samaha & Dahawy (2010) and Ezat & El-Masry (2008)
Earnings per share (EPS)	Ratio of profit after tax to total number of ordinary shares issued as used by Wisuttorn (2015)
Leverage (LEV)	Ratio of long term loan to shareholders funds as used by Wisuttorn (2015)
<b>Controlled Variables</b>	
Size (SIZE)	Logarithm of total assets as used by Khemir & Baccouche (2010) and Garko (2015)
Age (AGE)	Years of listing as used by Juhmani (2014) and Wang, Jiaotong, Song & Yao (2013)

Also, in line with the work of Garko (2015), Muhammad (2015), Naser & Hassan (2013), Khemir & Baccouche (2010), Reverte (2009) and Patten (1991) and many other similar CSR studies, the model developed to test the hypothesis of the study was specified as follows:

$$CSRDI = \beta_{0it} + \beta_{1it}ISO + \beta_{2it}MSO + \beta_{3it}BG + \beta_{4it}BS + \beta_{5it}ROA + \beta_{6it}LIQ + \beta_{7it}EPS + \beta_{8it}LEV + \lambda_{1it}SIZE + \lambda_{2it}AGE + \varepsilon_{it} \text{-----} (1)$$

Where: CSRDI: Corporate Social Responsibility Disclosure Index for company i in period t

ISO: Institutional share ownership for company i in period t

MSO: Managerial share ownership for company i in period t

BG: Board gender for company i in period t

BS: Board size for company i in period t

ROA: Return on assets for company i in period t

LIQ: Liquidity for company i in period t

EPS: Earnings per share for company i in period t

LEV: Leverage for company i in period t

SIZE: Size for company i in period t

AGE: Age for company i in period t

$\varepsilon$ : Error term for company i in period t

$\beta_0 - \beta_n$ : is the regression coefficient of the independent variables for company i in period t

$\lambda_0 - \lambda_n$ : is the parameters of the controlled variables for company i in period t

### **3.7 Techniques for data analysis**

Two techniques of data analysis were used to analyse the data generated for the study. They include descriptive statistics and multiple regression analysis.

#### **2.7.1 Descriptive Statistics**

Descriptive analysis was used to compute mean, standard deviation, minimum and maximum values of both dependent and explanatory variables of the study for the period of the study (2006 to 2017), as used in similar studies, such as Dibia & Onwuchekwa (2015), Garko (2015), Muhammad (2015), Juhmani (2014), Wang, Jiaotong, Song & Yao (2013), Naser & Hassan (2013), Uwuigbe & Egbide (2012) and Khemir & Baccouche (2010). It was equally used to ascertain the level of CSRDI by listed oil and gas marketing companies in Nigeria.

#### **2.7.2 Multiple regression**

To determine the variability in dependent variable (CSRDI) caused by changes in any of the explanatory variables (ISO, MSO, BG, BS, ROA, LIQ, EPS, LEV, SIZE, AGE) multiple regression of ordinary least square (OLS) and generalized least square (GLS) are used. For the OLS regression to be used a post estimation test was conducted, which includes multicollinearity, heteroscedasticity, and P-plot normality tests. These tests were conducted to ensure the reliability and validity of the statistical result. Moreover, the Hausman specification test was also conducted to choose between the fixed effect (FE) and random effect (RE) results.

## **CHAPTER FOUR**

### **RESULTS AND DISCUSSION**

#### **4.1 Introduction**

This chapter presents analyses and interprets the data generated for the study. The data relating to each of the statistical hypotheses of the study are presented and analyzed. The chapter is divided to four sub-sections. Apart from the introduction, the first section deals with the disclosure index, where a summary of the CSR by various companies included in the sample is presented and analyzed. Secondly, a robustness test of the dependent and independent variables followed. The subsequent section presents the descriptive statistics, correlation and regression results of the dependent and explanatory variables and finally, the last section discusses the implication of the findings.

#### **4.2 CSR Disclosures among Nigerian listed oil and gas marketing companies**

CSRDI is the dependent variable for this study. Thus, CSR was measured as the ratio of CSR items actually disclosed in the annual accounts to total CSR items included in the checklist. A dichotomous approach was used, whereby a company was awarded one (1) if an item included in the checklist was disclosed in its annual reports and awarded zero (0) if otherwise. Hence, the Summary of CSR by the listed oil and gas marketing companies for the period of the study is shown in Table 4.1

**TABLE 4.1: Disclosure Index of listed oil and gas marketing companies in Nigeria**

S/N	CSR D ITEMS CHECKLIST	Conoil Plc	Etiena Oil & Gas Co. Plc	Forfe Oil Plc	Japaul Oil Plc	Mobil Oil Nigeria Plc	MRS Oil Nigeria Plc	Oando Plc	Total Nig. Plc	TOTAL ITEMS DISCLOSED	CSR D ITEMS DISCLOSABLE	% OF ITEMS DISCLOSED
1	Non discrimination in Hiring of Staff	12	12	12	5	3	7	7	9	67	96	0.70
2	Information about Disabled Persons, Women or Minorities in the Workforce	12	12	12	5	3	7	10	9	70	96	0.73
3	Occupation of Women or Minorities in Management Positions	7	7	12	0	1	7	10	10	54	96	0.56
4	Turnover Rate and Resignation Policy	12	12	12	3	3	7	11	9	69	96	0.72
5	Number of Employees in the entire workforce	12	12	12	5	4	8	11	10	74	96	0.77
6	Managerial Remuneration	12	12	12	7	4	8	11	10	76	96	0.79
7	Employees Involvement / Participation in Management Decisions	12	12	12	5	1	7	7	9	65	96	0.68
8	Employee Training and Development	12	12	12	5	2	7	11	9	70	96	0.73
9	Retirement & Complementary Social Security Plans	12	12	12	7	3	8	10	10	74	96	0.77
10	Employee Welfare	12	12	12	5	1	7	10	9	68	96	0.71
11	Employee Health	12	12	12	5	1	7	10	9	68	96	0.71
12	Employee safety and Environment	12	12	12	5	1	7	10	9	68	96	0.71
13	Employee Education	12	12	12	5	2	7	10	9	69	96	0.72
14	Employee and Management Relation	12	12	12	5	5	7	8	9	70	96	0.73
15	Award program for employees	0	0	0	0	0	0	2	0	2	96	0.02
16	Grants / Scholarship for Children of Employees	10	0	0	0	0	0	3	0	13	96	0.14
17	Profile of Key Management Staff / Board Members	5	2	9	0	1	4	9	7	37	96	0.39
18	Attendance at Management / Board Meetings during the reporting year	8	5	9	1	1	7	9	7	47	96	0.49
19	Company's Distribution Network	12	12	0	3	2	4	4	9	46	96	0.48
20	Company's Major Supplier(s)	12	0	0	3	2	0	0	9	26	96	0.27
21	Compliance with Corporate Governance Code	12	11	12	7	2	7	9	9	69	96	0.72
22	Charitable Donations and Subscriptions	6	11	12	6	3	7	11	9	65	96	0.68
23	Sponsorships of Sports, Art & Cultural programs	6	7	11	1	3	6	11	3	48	96	0.50
24	Sponsorship of Community Program (Health)	10	7	11	0	3	5	9	3	48	96	0.50
25	Grants to Public Universities & Tertiary Institutions	10	7	11	0	3	7	11	3	52	96	0.54
26	Environmental policies	6	4	5	0	1	3	3	1	23	96	0.24
27	Fines to the Host Community where Company Operates	8	11	8	0	0	1	5	1	34	96	0.35
28	Types of product Manufactured / Traded by the Company	0	0	1	0	0	0	0	0	1	96	0.01
29	Product Research and Development	12	12	9	6	12	7	11	8	77	96	0.80
30	Product Quality and Safety	12	12	7	1	12	7	9	8	68	96	0.71
31	Customer Service and Satisfaction	12	12	7	4	10	6	9	8	68	96	0.71
32	Products Compliance with Safety Standards	12	2	6	1	10	1	5	1	38	96	0.40
33	Pollution Control / Repair of Environmental Damage	12	12	6	3	10	6	5	1	55	96	0.57
34	Energy Saving / Emission Reduction	0	5	4	0	0	0	1	7	17	96	0.18
35	Environmental Conservation	0	10	4	0	0	0	1	7	22	96	0.23
36	Conserving Natural Resources	0	10	4	0	0	0	1	7	22	96	0.23
37	Solid waste disposal information	0	6	0	0	0	0	0	7	13	96	0.14
	<b>TOTAL ITEMS DISCLOSED</b>	328	321	304	103	110	179	264	245	1,854	3,552	<b>0.52</b>
	<b>CSR D ITEMS DISCLOSABLE</b>	444	444	444	444	444	444	444	444	3,552	3,552	<b>1</b>
	<b>% OF ITEMS DISCLOSED</b>	0.74	0.72	0.70	0.23	0.25	0.40	0.60	0.55	<b>0.52</b>	<b>1</b>	<b>0.52</b>

Source: Data collected from the field as contained in Appendix IV

Table 4.1 showed the level of CSRD by listed oil and gas marketing companies according to the items included in the CSRDI. It also showed the level of CSRD by each of the listed oil and gas marketing companies included in the sample and the overall CSRD by the entire listed oil and gas marketing companies.

From the Table, among the thirty seven items included in the CSRDI, an item with the highest disclosure is product research and development, which was disclosed in 77 financial statements of the sampled firms (77 times) out of the 96 financial statements that covered the period of the study. This represents 80% of the expected disclosure of such item in the entire financial statements that covered the period of the study. The second highest disclosure items was Managerial remuneration which was disclosed in 76 financial statements of the sampled firms (76 times) out of the 96 financial statements that covered the period of the study. This represents 79% of the expected disclosure of such item in the entire financial statements that covered the period of the study. The third highest disclosure items are number of employees in the entire workforce and retirement and complementary social security plans disclosed in 65 financial statements each (65 times) out of the 96 financial statements reviewed. This represents 68% of the expected disclosure of such items, respectively. However, the items with the least disclosure is types of product manufactured or traded by the company that was disclosed in only 1 financial statements (once only) out of the 96 financial statements reviewed. This represents only 1% of the expected disclosure of such items.

The Table also disclosed the level of CSRD by each of the sampled companies. According to hierarchy, the company with the highest disclosure was Conoil, plc that disclosed CSR items 328 times out of 444 times expected disclosure in the 96 financial statements covered by this study. This represents 74% of the maximum expected disclosure of CSR items included in the CSRDI. The second company with the highest disclosure is Eterna Oil & Gas Company, plc that disclosed CSR items 321 times out of 444 times expected disclosure in the 96 financial statements covered by this study, representing 72% of the maximum expected disclosure. The third company with the highest disclosure is Forte Oil, plc that disclosed CSR items 304 times out of 444 times expected disclosure in the 96 financial statements covered by this study, representing 70% of the maximum expected disclosure. The companies ranked fourth, fifth, sixth, seventh and eighth in terms of the level of CSRD are Oando, plc, Total Nigeria, plc, MRS

oil Nigeria, plc, Mobil Oil Nigeria, plc and Japaul Oil, plc, respectively. They disclosed CSR items 264 times, 245 times, 179 times, 110 times and 103 times respectively out of 444 times expected disclosure in the 96 financial statements covered by this study, representing 60%, 55%, 40%, 25% and 23%, respectively. The Table also showed the overall level of CSRD by the entire listed oil and gas marketing companies sampled for the study. And it can be deduced that the eight companies disclosed 1,854 CSR items in 96 audited financial statements out of the 3,552 CSR items expected to be disclosed in the 96 audited financial statements covered by the study. This showed that the overall CSRD by listed oil and gas marketing companies averaged 52%. This showed that, the overall level of CSRD in Nigeria had significantly improved during the period of the study compared to the results from similar studies conducted prior to this study (Farouk and Hassan (2013), 0.28%; Ebiringa, Yadirichukwu, Chigbu and Obi (2013), 0.28%).

#### **4.3 Discussions of Results**

This section presents the results of the analysis conducted on the data collected from the annual audited financial statements of the sampled companies for the period covered by the study. It presents the descriptive statistics, correlation and regression results.

##### **4.3.1 Descriptive Statistics**

This sub-section provides descriptive statistical analysis of the data generated on the dependent and explanatory variables of the study. It provides the summary statistics of the data collected, which include measures of central tendency (mean), measures of dispersion (standard deviation, minimum and maximum values) of both the dependent and explanatory variables. Thus, Table 4.3.1 presents the descriptive statistics in respect of the dependent variable (Corporate social responsibility disclosure index) and explanatory variables (institutional shareholding, managerial shareholding, board gender, board size, return on assets, liquidity, EPS, leverage, size and age).

**Table 4.2: Descriptive Statistics**

Variables	Obs	Mean	Std. Dev.	Min	Max
Corporate social responsibility disclosure index	96	0.5213	0.2834	0.0000	0.8649
Institutional shareholding	96	0.5307	0.2168	0.0563	0.7747
Managerial shareholding	96	0.4900	0.0885	0.0001	0.6003
Board gender	96	0.9585	0.0918	0.0000	0.3000
Board size	96	8.6667	2.4351	4.0000	16.0000
Return on assets	96	0.0423	0.1297	-0.7127	0.2396
Liquidity	96	1.8169	5.6459	0.2451	49.1821
Earnings per share	96	4.0936	6.2423	-16.0330	22.6134
Leverage	96	0.5277	0.7295	0.0148	5.2130
Size	96	10.6798	0.5082	9.0823	12.0171
Age	96	24.0625	10.4265	1.0000	39.0000

Source: STATA Version 12.0 output as shown in Appendix III (A)

Table 4.2 shows that the mean CSRD of the sampled firms is about 52%, which means that the Nigerian listed oil and gas marketing companies' CSRD is 52% and the level of CSRD in the downstream sector of the Nigerian oil and gas industry is moderate, with a minimum disclosure level of 0% and maximum disclosure level of 86.49%. The standard deviation of 0.2834 indicates that there is a significant variation in CSRD among the sampled firms during the period of the study. The mean proportion of institutional shareholding in the Nigerian listed Oil & Gas marketing companies is 53.07%, meaning that on average 53.07 of the issued share capital was owned by institutional investors while the remaining 46.93% belongs to other categories of investors. The minimum and maximum proportions of institutional shareholding are 5.63% and 77.47%, respectively. And that the standard deviation of 0.2168 indicates that a proportion of the institutional shareholding among the sampled firms is diverse. On the other hand, on average managerial shareholders owned about 49.00% of the total equity share capital issued by the sampled firms throughout period of the study. The minimum and maximum proportion of managerial shareholding is 0.01% and 60.03%, respectively. And that the standard deviation of 0.0885 indicates that the proportion of institutional shareholding among the sampled firms is also diverse. The average proportion of women members on the board is 9.59%. This postulated that on average only 10% of the board members are women while the remaining 90% are men. This indicates that majority of the board structures of the sampled firms have more men and fewer women. The standard deviation of 0.918 indicates that there is a significant difference in

composition of boards' structure in terms of gender among the sampled companies. The minimum value is 0 while the maximum value is 3 (all of which are been dichotomous values). On average the board size contained about 9 members and the minimum and maximum number being 4 and 16, respectively. The standard deviation of 2.4351 revealed that there is a significant variation in respect of board size in the sampled companies.

The mean return on assets was about 4%, indicating that the average profit earned by the sampled companies is 4%, with a maximum loss of 71.2% and maximum profit of about 23.96%. The standard deviation of 0.1297 indicates that there is no significant dispersion among the sampled companies with regards to return on assets. The mean liquidity position of the sampled firms is 181.61%. This means that on average current assets of the sampled companies are higher than current liabilities by 81.61% at the end of each financial year throughout the period of the study. The minimum as well as the maximum liquidity position attained by the sampled firms are 24.51% and 491.82%, respectively. The standard deviation of 5.6459 indicates a significant dispersion among the sampled companies with regards to liquidity.

The mean earnings per share was about 409.36%, indicating that for every ₦1 invested in shares of the sampled companies an average return of ₦4.09 was gained at the end of each financial year throughout the period of the study, with a maximum loss in earning per share of -160.33% and maximum earning per share of 226.13%. The standard deviation of 6.2423 indicates a significant dispersion among the sampled companies in respect of their earnings per share.

The mean leverage is 52.77 throughout the period of the study. This means that on average the long term debt of the sampled companies covered 52.77% of the total capital of the company at the end of each financial year throughout the period of the study. The minimum and maximum leverage are 1.48% and 521.30%, respectively. The standard deviation of 0.7295 indicates a significant dispersion among the sampled companies with regards to leverage. Firm size, measured by the natural logarithm of total assets has a mean of about 10.67, with a minimum of about 9.0823 and maximum of about of 12.0171. But the standard deviation of 0.5082 signifies high level of dispersion in terms of size among the sampled companies.

Finally, the years of operation of the sampled companies averaged 24. This means that on average majority of the sampled firms operate for at least 24 years from the date of their incorporation to the period covered by the study. During the period of the study, the minimum as

well as the maximum years of operation spend by the sampled firms are 1 and 39 years, respectively. The standard deviation of 10.4265 indicates that there is a significant difference in in terms of years of operation among the sampled firms.

#### **4.4. Robustness Test of Independent and Dependent Variables**

The robustness test is conducted in order to ensure the validity of all statistical inferences for the study, so as to assess the impact of distribution problems in addition to the problems of outliers before deciding on the appropriate statistical method to use. The tests include multicollinearity, heteroscedasticity, normality of residuals and Hausman specification. These are discussed below.

##### **A. The Multicollinearity Test**

The two common ways to check for the presence of multicollinearity between independent variables are correlation coefficients and variance inflation factors (VIF) with tolerant values. This study used VIF to check whether the explanatory variables of the model suffer from multicollinearity. The VIF in excess of 10 should be taken as an indication of harmful multicollinearity (Neter, Wasserman & Kutner 1989, and Gujarati 2003). The result of the test show that the maximum and minimum value of VIF are 4.49 and 1.19, respectively. All values obtained are less than 10, which indicated the absence of multicollinearity (**Appendix III**)

##### **B. The Heteroskedasticity Test**

To check whether the variability of error term is constant or not, Breusch-Pagan / Cook-Weisberg tests for heteroscedasticity was conducted, and the result indicates that the error terms have no constant variance with p-value of 0.0766 for model 1 (Appendix III) and OLS (robust standard error) were carried out as a remedial action.

##### **C. Normality Test of the Residuals**

Normality of errors (residuals) means error terms are normally distributed. This can be tested using normal plot, histogram or numerically using Skewness and Kurtosis tests for normality. This study numerically tested for normality of both error terms and variables via Skewness and Kurtosis tests for normality. The result indicates that the error term for the model was normally distributed with p-value of 0.1343 as shown in Appendix III. However, the normality test of the

study variables also indicates that all variables apart from board size were not normally distributed as evidenced with p-value of 0.000 (Appendix III). Hence Spearman rank order correlation was used instead of Pearson correlation.

#### **D. The Hausman Specification Test**

Hausman Specification tests was conducted in order to choose between GLS fixed effect and random effect results. The results showed that the fixed effect result is preferred over random effect results, with p-value of 0.0001 as shown in **Appendix III**

However, in exception the GLS random effect regression result was adopted by this study. The use of random effect could be justified by the need to accommodate the differences in the sample which comes from the heterogeneous population. According to DerSimonian and Kacker (2007) and Borenstein, Hedges, Higgins and Rothstein (2010), the random effect method usually account for the variation across the sample over a period of time. Meaning that the GLS random effect results may be preferred over the GLS fixed effect in a study that involved heterogeneous population.

From the results of the robustness tests performed, it was evident that the research data used in testing the hypotheses was believed to be accurate and reliable. As the results showed that the data were free of regression errors capable of invalidating the research's regression assumptions, meaning that the data were suitable and the regression estimates obtained are reliable.

#### **E. Correlation Matrix**

The results of the Spearman correlation between the dependent variable (corporate social responsibility disclosure index) and explanatory variables (institutional share ownership, managerial share ownership, Board gender, Board size, Audit committee meetings, Audit Committee Composition, profitability, liquidity, Earnings per share, leverage, size and age) are presented in Table 4.3. It also shows the relationship between all variables in the regression model, the relationship between all explanatory variables individually with explained variable and the relationship between all the explanatory variables themselves. This gives an insight into the magnitude of the pairs of the explanatory variables.

**Table 4.3: Spearman Correlation Matrix of the Dependent and Explanatory Variables**

Variables	CSRDI	ISO	MSO	BG	BS	ROA	LIQ	EPS	LEV	SIZE	AGE	VIF
CSRDI	1.000											
ISO	1.000	1.000										2.96
MSO	-0.591	-0.591	1.000									1.14
BG	0.159	0.159	-0.055	1.000								1.65
BS	0.132	0.132	-0.224	0.183	1.000							1.61
ROA	0.304	0.304	-0.364	-0.139	-0.171	1.000						1.84
LIQ	0.230	0.230	0.366	-0.014	-0.112	0.040	1.000					1.09
EPS	0.420	0.420	-0.444	-0.101	0.066	0.755	-0.066	1.000				2.32
LEV	-0.101	-0.101	-0.298	-0.058	-0.052	0.059	-0.479	0.051	1.000			1.32
SIZE	0.238	0.238	-0.162	0.427	0.529	-0.214	-0.088	0.235	0.081	1.000		2.44
AGE	0.613	0.613	-0.212	0.253	-0.046	0.315	-0.000	0.590	0.132	0.396	1.000	3.58

Source: STATA Output 12.0 based on data in Appendix III (B)

Table 4.3 shows the correlation coefficients on the relationship between the dependent variable (CSRDI) and explanatory variables (institutional share ownership, managerial share ownership, Board gender, Board size, profitability, liquidity, Earnings per share, leverage, size and age). The values of the correlation coefficient range from -1 to 1. The positive or negative sign associated with each correlation coefficient in the matrix indicates the direction of the relationship between the dependent and independent variables and among various independent variables themselves. The larger value of the correlation coefficient indicates a strong association among variables and vice versa. Moreover, the correlation coefficients on the main diagonal are 1.0, because each variable has a perfect positive linear relationship with itself.

The results from Table 4.3 revealed a weak but positive relationship between BG, BS, ROA, LIQ, EPS and SIZE with CSRDI, with a correlation coefficient value of 0.159, 0.132, 0.304, 0.230, 0.420, and 0.238, respectively. Also, a strong positive relationship was found between ISO and AGE with CSRDI, with a correlation coefficients of 1.000 and 0.613, respectively. However, a strong negative relationship was found between MSO and CSRDI, with a correlation coefficient value of -0.591. Similarly, a weak negative relationship was found between LEV and CSRDI, with correlation coefficient value of -0.101. Similarly, there is a weak negative relationship between ISO with LEV and a strong negative relationship between ISO with MSO, while all other explanatory variables have a weak positive relationship with ISO apart from AGE

that has a positive and strong relationship with ISO. MSO has a positive but weak relationship with LIQ, and a negative but weak association with BG, BS, ROA, EPS, LEV, SIZE and AGE. BG has a positive but weak relationship with BS, SIZE and AGE. BG was also found to have a negative but weak association with ROA, LIQ, EPS and LEV. BS has a strong positive association with SIZE, and positive but weak association with EPS. However, BS was found to have a weak negative relationship with ROA, LIQ, LEV and AGE. ROA has negative but weak relationship with SIZE and a positive but weak relationship with LIQ, LEV and AGE. ROA also has a strong positive relationship with EPS. EPS has a strong positive relationship with AGE, but a weak positive relationship with LEV and SIZE. LEV has a positive but weak relationship with SIZE and AGE. SIZE was also found to have a weak positive relationship with AGE.

A test to determine the presence of collinearity problem was also conducted. Collinearity arises where two of the independent variables are related and multicollinearity is where more than two of the independent variables or predictors are correlated, which implies interdependence among the predictors or independent variables. If high in magnitude, it adversely affects the predictive ability of the independent variables. To determine the presence of the collinearity problem, a Variance Inflation Factor (VIF) test was conducted. The results from Table 4.3 provide evidence of the absence of collinearity. This is because the results of the VIF test range from a minimum of 1.09 to a maximum of 3.58. The general rule is that a VIF of less than 10 can still be a proof of the absence of collinearity and VIF in excess of 10 should be considered an indication of harmful multicollinearity (Neter, Wasserman & Kutner 1989 and Gujarati 2003). Thus, the predictive ability of the independent variables is not adversely affected by the relationship.

#### **4.4 Regression Results on firm attributes and CSR**

This subsection presents and interprets the results obtained from the test of the research hypotheses. All the study hypotheses are tested using OLS and GLS (Random & fixed effect) regression model. The regression results are presented in Table 4.4.1. Therefore, the coefficient and Z-values of GLS regression result of the dependent variable (CSRDI) and all explanatory variables (ISO, MSO, BG, BS, ROA, LIQ, EPS and LEV) are presented in Table 4.4.1:

**Table 4.4: Random Effect GLS Regression Results (Impact of Firm attributes on CSRDI)**

Variables	Coefficient	Z – Value	P>/Z/
Constant	-0.6237374	-0.91	0.361
ISO	0.8980064***	4.79	0.000
MSO	0.2521031	0.89	0.372
BG	1.214868***	3.72	0.000
BS	-0.0026599	-0.22	0.829
ROA	-0.6532321***	-2.68	0.007
LIQ	0.005736	1.32	0.185
EPS	0.0102409**	2.21	0.027
LEV	-0.0932976***	-2.54	0.011
SIZE	0.0936144	1.31	0.190
AGE	-0.0117033***	-4.08	0.000
Obs.	96		
Wald Chi2:	62.45***		
Overall R <sup>2</sup>	0.4235		

Source: STATA Output 12.0 based on data in Appendix III(C). NOTE: \*\*\*, \*\* and \* indicate 1%, 5% and 10% significant levels respectively.

The Model for the study in Table 4.4 presents the GLS regression (random effect) result of the dependent variable (CSRDI) and firm attributes proxies together with the controlled variables of the study (ISO, MSO, BG, BS, ROA, LIQ, EPS, LEV, SIZE and AGE). The results revealed an overall coefficient of determination ( $R^2$ ) of 0.4235 and it is the multiple coefficient of determination that gives the percentage of the total variation in the dependent variable (CSRDI) explained by the explanatory variables jointly. Hence, this signifies that 42.35% changes in CSRDI of the Nigerian listed oil and gas marketing companies is caused by the aforementioned explanatory variables collectively; while the remaining 57.65% of the total changes in CSRDI was caused by other factors not explained by the model. This indicates that the model is statistically fit, as the variables used as firm attributes accounted for 42.35% changes in the level of CSRDI. This can be confirmed by the value of Wald Chi<sup>2</sup> of 62.45 at the 1% level of significance.

The random effect GLS regression result in Table 4.4 also revealed that ISO is positively associated with CSRDI and statistically significant at the 1% level of significance. Therefore, the results indicated that ISO has a positive and significant effect on CSRDI of Nigerian listed oil and gas marketing companies. This finding is consistent with the findings of Wang, Jiaotong, Song and Yao, (2013), Farouk and Hassan (2013), Arshad and Vakhidulla (2011), Yao, Wang and

Song (2011), Abdulhaq and Muhammed (2015) and Das, Dixon & Michael (2015). However, it contradicts the findings of Reverte (2009), Arshad and Vakhidulla (2011), Suttipun and Stanton (2012), Sulaimana, Abdullahb and Fatima (2014), Hussainey, Elsayed and Abdel-Razik (2011) and Murya Habbash (2016) who found negative and significant association between ISO and CSR. This finding implies that an increase in ISO holding other explanatory variables constant increases the level of CSR. This means that the higher the proportion of shares held by institutions out of the total issued share capital of the company, the higher will be the level of CSR and vice-versa.

Also, the results in Table 4.4 revealed that MSO has an insignificant positive association with CSR. Therefore, the results indicated that MSO has a positive but an insignificant effect on CSR of Nigerian listed oil and gas marketing companies. This finding is consistent with the findings of Naser and Hassan (2013) and Bahrie Lecaj and Mathias Heinrich (2010). However, it contradicts that of Suttipun and Stanton (2012) and Hussainey, Elsayed and Abdel-Razik (2011), who found a negative and significant association between MSO and CSR. Additionally Garko (2015) also found a negative but an insignificant association between MSO and CSR. This finding implies that an increase in MSO holding other explanatory variables constant increases the level of CSR. This means that the higher the proportion of share held by management staff out of the total issued share capital of the company, the higher will be the level of CSR and vice-versa.

The results also showed that female directors on board have positive and significant association with CSR at 1% level of significance. Therefore, the results showed that, board gender has positive and significant effect on the extent of CSR of Nigerian listed oil and gas marketing companies. This finding is consistent with the findings of Albawwat, & Ali Basah (2015), and Hossain (2008), who equally found a positive and significant relationship between female directors on board and the level of CSR. Therefore, this finding implies that the more number of female directors on board, the higher will be the level of CSR by companies.

The results also showed that board size has a negative but an insignificant effect on CSR of Nigerian listed oil and gas marketing companies. This finding is consistent with the findings of Abu Sufian & Zahan (2013) and Mohammad Abu Sufian & Muslima Zahan (2013), which revealed a negative but an insignificant association between board size and the level of CSR;

but contradicts the findings of Das, Dixon and Michael (2015), Marwa Abdel Razek (2014) and Garko (2015), who found a positive relationship between board size and the level of CSR. Therefore, this finding implies that the larger the board size the lower will be the level of CSR and vice-versa.

The result in Table 4.3 also disclosed a significant negative relationship between return on assets and the level of CSR. This finding is similar to that of Farouk & Hassan (2013), Arshad & Vakhidulla (2011), Ebiringa, Yadirichukwu, Chigbu & Obi (2013), Hussainey, Elsayed & Abdel-Razik, (2011), Rahayu Abdull Razak (2015), Setyorini & Ishak (2012), Ibrahim, Mohamad, Yunus & Norwani (2014), Uwuigbe & Egbide (2012) and Mohammed Hossain (2008). But it is inconsistent with that of Deitiana (2015), Skouloudis, et al (2014), Al- Shubiri, Al-abedallat & Abu Orabi (2012), Suttipun & Stanton (2012), Sulaimana, Abdullah & Fatima (2014) and Murya Habbash (2016). Therefore, this finding suggested that companies with high profits (defined as return on assets) disclose less CSR information in their annual reports than those with low profit.

The results in Table 4.4 also revealed an insignificant positive relationship between liquidity and the level of CSR. This finding is similar to that of Sulaimana, Abdullah and Fatima (2014), Maliah Sulaimana, Norhayati Abdullah and A. H. Fatima (2014), Musa Adeiza Farouk and Shehu Usman Hassan (2013), Faris Nasif Al- Shubiri, Abdelfattah Z. A., and Marwan M. Abu Orabi (2012) and Omar Juhmani (2014). But it contradicted the findings of Dibia and Onwuchekwa (2015), Rufino and Machado (2015), Abdulhaq and Muhammed (2015), Hussainey, Elsayed and Abdel-Razik (2011), Rahayu Abdull Razak (2015), Ibrahim, Mohamad, Yunus and Norwani (2014), Bahrie Lecaj and Mathias Heinrich (2010), Murya Habbash (2016) and Ndukwe O. Dibia and John Chika Onwuchekwa (2015). Therefore, this finding suggested that companies with high liquidity (defined as ratio of current assets to current liabilities) tend to disclose more CSR information in their annual reports than those with low liquidity position and vice-versa.

Furthermore, the results in Table 4.4 also revealed a significant positive relationship between EPS and the level of CSR at the 5% level of significance. This finding is similar to that of Setyorini and Ishak (2012). But it is inconsistent with that of Makori and Jagongo (2013) and Ibrahim, Mohamad, Yunus and Norwani (2014). Therefore, this finding revealed that companies

with high EPS tend to disclose less CSR information in their annual reports than those with low EPS. The results also revealed a negative and significant relationship between leverage and the level of CSRD at 1% level of significance. This finding is similar to that of Deitiana (2015). But it is inconsistent with that of Al- Shubiri, Al-abadallat & Abu Orabi (2012) and Farouk & Hassan (2013). Therefore, this finding suggested that companies with high leverage ratios disclosed less CSR information in their annual reports than those with low leverage ratios.

Moreover, a positive but an insignificant association was discovered between firm size and the level of CSRD. Thus, the regression results revealed an insignificant association between size and the level of CSRD. This finding is similar to that of Juhmani (2014), Kansal, Joshi and Batra (2014), Ebiringa, Yadirichukwu, Chigbu and Obi (2013) and Abdulhaq and Muhammed (2015). But it was inconsistent with that of Deitiana (2015), Skouloudis, et al. (2014), Naser and Hassan (2013), Wang, Jiaotong, Song and Yao (2013), Al- Shubiri, Al-abadallat and Abu Orabi (2012), Reverte (2009), Farouk and Hassan (2013), Yee, Yen, Kian, Von and Keong (2012), Tagesson, Blank, Broberg and Collin (2009), Suttipun and Stanton (2012), Sulaimana, Abdullahb and Fatima (2014), Yao, Wang and Song (2011), Rufino and Machado (2015), Rahayu Abdull Razak (2015), Bandara (2016), Das, Dixon and Michael (2015), Setyorini and Ishak (2012), Ibrahim, Mohamad, Yunus and Norwani (2014), Ibrahim, Mohamad, Yunus and Norwani (2014), Bahrie Lecaj and Mathias Heinrich (2010), Murya Habbash (2016) and Mohammed Hossain (2008). Therefore, this finding revealed that the larger the size of the company the higher the level of CSRD in annual reports and vice-versa.

The result in Table 4.4 also revealed a significant negative association between age of the firm and the level of CSRD at the 1% level of significance. This finding is similar to that of Wang, Jiaotong, Song and Yao (2013) and Yao, Wang and Song (2011); and it contradicts that of Al-Shubiri, Al-abadallat and Abu Orabi (2012), Ibrahim, Mohamad, Yunus and Norwani (2014) and Murya Habbash (2016). Therefore, this finding revealed that the higher the years of operations of a company after being listed on the Nigerian stock exchange market the less will be the extent of CSRD in annual reports and vice-versa.

Hence, the impact of firm attributes on CSRD of the Nigerian listed oil and gas marketing companies was summarized as follows:

The firm attributes that are found to have a significant impact on the extent of CSR are Institutional share ownership, board gender, return on assets, EPS, leverage and age of the firm. Institutional share ownership, board gender and EPS were all found to have positive and significant association with CSR at the 1%, 1% and 5% level of significance, respectively. While return on assets, leverage and age of the firm are all found to have significant negative association with the level of CSR at the 1% level of significance. However, managerial share ownership, board size, liquidity and size are all found to have an insignificant association with the level of CSR of Nigerian listed oil and gas companies.

The reported results in respect of institutional share ownership and age of the firm provides evidence of the significant impact of ownership structure on the extent of CSR of Nigerian listed oil and gas marketing companies. Therefore, Null Hypothesis One (Ho1) could not be accepted. Also, the reported results in respect of board gender and age of the firm provides evidence of the significant impact of board characteristics on the extent of CSR of Nigerian listed oil and gas marketing companies. Therefore, Null Hypothesis Two (Ho2) could not be accepted. In the same vein, the reported results in respect of return on assets, EPS, leverage and age of the firm provide evidence of the significant impact of financial performance on the extent of CSR of Nigerian listed oil and gas marketing companies. Therefore, Null Hypothesis Three (Ho3) could not be accepted. The reported results in respect of institutional share ownership, board gender, return on assets, earnings per share, leverage and age of the firm provide evidence of the significant impact of firm attributes on the extent of CSR of Nigerian listed oil and gas marketing companies. Therefore, Null Hypothesis Four (Ho4) could not be accepted.

#### **4.7 Implications of Findings**

The study has practical and regulatory implications. These implications are the contributions from this study, which are expected to add to the existing body of knowledge within the accounting research, regulations and practices. The findings also have considerable policy implications on the effectiveness of firm attributes adopted by this study in influencing the extent of CSR by the Nigerian listed oil and gas marketing companies.

The results showed that institutional share ownership has a significant positive association with the extent of CSR. This implies that the higher the proportion of shares held by institutions in a

company, the higher will be the level of CSR in annual reports. This means that the degree to which ownership of company stock is concentrated in the hands of a few large investors usually improves the level of CSR in annual reports. The results also showed that board gender have a significant positive relationship with the extent of CSR in annual reports. This implies that the higher the number of women on board the higher will be the level of CSR and vice-versa. This is because evidence showed that companies that encourage female leadership have higher levels of philanthropy. However, the results also revealed a significant negative relationship between return on assets and the level of CSR. This result showed that less profitable companies tend to disclose more CSR information in annual reports than profitable once. This implies that some companies sustaining losses may try to disclose more CSR information in order to enable them to explain what went wrong and how they intend to correct it. On the other hand, the results revealed a significant positive association between earnings per share and the extent of CSR. This implies that an increase in earnings per share in each financial year largely increases the level of CSR in annual reports and vice-versa. On the other hand, the results also provide evidence that there exists a significant negative association between leverage and the level of CSR. This implies that the higher the proportion of long term debt in relation to shareholders funds in each financial year the lower will be the level of CSR in annual reports and vice-versa. Meaning that, some companies having tremendous leverage tend to disclose less CSR information than those with low leverage ratios.

Findings also showed that the level of CSR by oil and gas marketing companies averaged 52%, which is similar to the level found in countries that makes CSR in annual reports mandatory. Therefore, this implies that, since these companies engaged in this practice voluntarily, making CSR in annual reports mandatory will not create any tension in Nigeria. Therefore, regulatory authorities, such as the Nigerian Accounting Standards Board (NASB), Security and Exchange Commission (SEC), Financial Reporting Councils of Nigeria (FRCN); and professional Accounting bodies like the Institute of Chartered Accountants of Nigeria (ICAN) and Association of National Accountants of Nigeria (ANAN) should come up with a framework that will recommend to government making CSR as part of the statutory requirements in annual reports.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Summary**

This dissertation comprised five chapters. The first chapter opens with a background of the study in which a general overview of the area of the study was made with a view to appreciate the study environment and the impact of firm attributes on the extent of CSRD of Nigerian listed oil and gas marketing companies. CSRD has received considerable attention in corporate reporting, because it involves extending the accountability of the company beyond the traditional role of providing a financial account to the shareholders or meet statutory or regulatory requirements. CSR information could be qualitative or quantitative in nature or both and can be reported in the firm's audited financial statements, a specific report, a media release or other forms of communication. Moreover, researchers in academics working in the realm of corporate social responsibility (CSR) have shifted their focus from measuring the level of CSRD in the audited financial statements to exploring its determinants. CSRD is defined as a process of providing financial and non-financial information in the social and environment context (Hackston & Milne 1996). It is also an extension of the financial disclosure system that reflects the wider anticipation of society concerning the role of the business community in the society. Hence, globally, the users of corporate information have intensified their expectation of published corporate disclosure to meet their needs. However, the disclosures rarely meet the expected needs because of information asymmetry between managers and relevant stakeholders.

Chapter Two reviews the related literature on the issues, concepts, findings and theories related to CSRD and its determinants. Various definitions of the subject matter by different scholars and institutions according to their perception were critically reviewed. The review of related literature also revealed that, unlike mandatory disclosure that must be made in annual reports, as required by law like CAMA and regulatory authorities like SEC, IASB and FASB, etc. CSRD is information that is voluntarily added in annual reports in excess of disclosure requirements. Moreover, Agency, Stakeholders and Legitimacy theories were used to explain the variations of CSRD in the annual reports of the investigated firms in relation to its determinants.

However, the chapter on research methodology explains the relevant research tools adopted for the study. An ex-post facto research design was used and data for the study was collected from

annual reports of the sampled companies for the period of the study (2006 to 2016). Population of the study comprised the entire 12 Oil and gas marketing companies that are listed on the Nigerian Stock Exchange as at 31st December, 2017. Descriptive statistics and multiple regressions were used to analyze the data collected for the study using STATA version 12.0.

Chapter Four presented, analyzed and interpreted the data generated for the study, the result of which was used to test all the hypotheses of the study. The result of the regression analysis led to the rejection of all the Null Hypotheses of the study. Also, robustness tests (multicollinearity, Heteroscedasticity and Hausman specification) were conducted in order to assess the validity of all the statistical techniques used for the study. Therefore, based on the results obtained, it was found that ISO, BG, ROA, EPS and LEV have a significant influence on the extent of CSR of Nigerian listed oil and gas marketing companies. While MSO, BS and LIQ were found to have an insignificant influence on the extent of CSR of Nigerian listed oil and gas marketing companies. Additionally, among the controlled variables adopted for the study, only AGE was found to have a significant influence on the extent of CSR of Nigerian listed oil and gas marketing companies.

## **5.2 Conclusions**

Based on findings, the following conclusions are being reached:

- i. CSR in the annual reports of the Nigerian listed oil and gas marketing companies was moderate (as it averaged 52%).
- ii. Institutional share ownership forms part of the major determinants of CSR of the Nigerian listed oil and gas marketing companies.
- iii. Board gender also forms part of the major determinants of CSR of the Nigerian listed oil and gas marketing companies.
- iv. Return on assets also forms part of the major determinants of CSR of the Nigerian listed oil and gas marketing companies.
- v. Earnings per share also form part of the major determinants of CSR of the Nigerian listed oil and gas marketing companies.

- vi. Leverage was also among the major determinants of CSRD of the Nigerian listed oil and gas marketing companies.
- vii. Age was also form part of the major determinants of CSRD of the Nigerian listed oil and gas marketing companies.

### **5.3 Recommendations**

The following recommendations are made based on the conclusions reached:

- i. The Nigerian listed oil and gas marketing companies should have to sustain or even improve the level of their CSRD in annual reports in order to enable them satisfy the information needs of various users of financial statements.
- ii. The regulatory authorities should continue to encourage companies to voluntarily disclose more CSR information in their annual reports, or even consider making it as part of the statutory requirements as practiced in some countries around the world.
- iii. The Nigerian listed oil and gas marketing companies should have to align their policies in such a way that will promote more institutional shareholding rather than diverse individual share ownership, and ensure the adequate representation of women on board, as this will enable them to sustain or even improve CSRD in annual reports.
- iv. The Nigerian listed oil and gas marketing companies should have to align their policies in such a way that will improve their profitability, earnings per share and leverage in order to enable them to sustain or even improve CSRD in annual reports.

### **5.4 Limitations of the Study**

This study has some limitations that are to be considered in the assessment of its findings. The first limitation is that it covers only the Nigerian listed oil and gas marketing companies as the area of study. Additionally, the study does not extend its findings beyond the study population, as the results do not cover other sectors of the economy. Another limitation is the measurement of voluntary disclosure, thereby adopting a dichotomous approach in scoring the items included in the checklist in order to come up with CSRDI. As such, it measures whether a particular item is disclosed instead of evaluating the quality of the disclosure itself. Another limitation is that the

focus of the study is to ascertain the factors influencing the extent of CSRD of the Nigerian listed oil and gas marketing companies over the period of the study. There are several determinants of CSRD investigated in similar studies that are not covered by this research work.

### **5.5 Frontier for Further Research**

This research examines the impact of ownership structure, board characteristics and financial performance on CSRD of the Nigerian listed oil and gas marketing companies and has paved way for further researches in this regard. The relationship between ownership structure, board characteristics and financial performance and CSRD in other sectors of the economy such as the construction / real estate, consumer goods, conglomerates, agriculture, financial services and ICT industries requires another research effort, as they are not covered by this work. Additionally, the same type of research can be conducted in the downstream sector of the Nigerian oil and gas industry by bringing in other factors / determinants that are not covered by this work. Also, the period of twelve years covered by this work (2006-2017) can be extended in future researches. Furthermore, conducting similar research in this area will not only complement this study, but also help in bringing up to date improvements in CSRD practices of quoted firms in Nigeria. Finally, this study uses the quantitative method of data collection and ignored the qualitative approach. However, using qualitative techniques, such as interviews and questionnaires, in addition to the quantitative approach may improve the quality of the findings from future disclosure studies.

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## APPENDIX I

<b>Literature Table on the Determinants of Corporate Social Responsibility Disclosure.</b>							
S/N	Authors	Country	Analysis	CSR Checklist	Determinants.	Sign.	Significance
1	Abdurrahman, & Ismail (2016)	Malaysia	Sample 300 companies listed on the Bursa Malaysia in 2013		Government ownership politicians on boards	+ -	Sig. Not Sig.
2	Bandara (2016)	New Guinea	Population 19, Sample 10, ANOVA, Descriptive statistics, Pearson and Spearman's correlation, Regression Analysis	36 Items	Company size Profitability Listing nature Industry type <b>Observations:</b> R <sup>2</sup> 0.54 Adj. R <sup>2</sup> -0.14	+ + - -	Sig. Not Sig. Not Sig. Not Sig.
3	Habbash (2016)	Saudi Arabia	Sample 267 Saudi non-financial-listed firms from 2007 to 2011. Multiple regression Analysis.		Firm size Age Government ownership Family ownership Profitability Leverage Institutional ownership, Board independence Type of Industry	+ + + + - - - - -	Sig. Sig. Sig. Sig. Not Sig. Not Sig. Not Sig. Not Sig. Not Sig.
4	Hu, Zhu, & Hu (2016)	China	Sample 1,872 listed Chinese firms in 2010.		Firm size, Profitability Leverage foreign investors	+ + + +	Sig. Sig. Sig. Sig.
5	Albawwat, & Ali-basah (2015)	Jordan	Sample size comprised 72 companies listed on the ASE.		Audit firm type Government ownership Board compensation	+ + +	Sig. Sig. Sig.
6	Abdulhaq, & Muhammed (2015)	Saudi Arabia	Population 163, Sample 163, Pearson Correlation Analysis, Descriptive Statistics and Multiple Regression	44 items	Firm Size Ownership Concentration. Profitability Type of Industry Leverage Type of Audit Firm <b>Observations:</b> R <sup>2</sup> 0.401 Adj. R <sup>2</sup> 0.387	+ + + - - -	Sig. Sig. Not Sig. Sig. Not Sig. Not Sig.
7	Akanno, Ferdinand, Radda & Uzodinma (2015)	Nigeria	Sample 40, Descriptive Statistics and Multiple Regression Analysis		Size Industry type	+ +	Sig. Sig.
8	Dibia, & Onwuchekwa	Nigeria	Sample 15, Pearson		Profitability Firm Size	+ -	Not Sig. Sig.

	(2015)		Correlation, Descriptive Statistics and Binary Regression Analysis (Logit & Probit).		Leverage Audit Firm Type <b>Observations:</b> R <sup>2</sup> 0.521	- -	Not Sig. Not Sig.
9	Das, Dixon, & Michael (2015)	Bangladesh	Population 30, Sample 29.	40 Items	Firm size Board size Ownership structure Non-executive director Profitability CEO duality Age of the company <b>Observations:</b> Adj. R <sup>2</sup> 0.315 F- Value 10.110	+ + + + + + -	Sig. Sig. Sig. Sig. Not Sig. Not Sig. Not Sig.
10	Garko (2015)	Nigeria	Population 23, Sample 13, Descriptive statistics, Bivariate analysis, & Multiple regression analysis.	87 Items	Board size Audit committee meetings Firm size Profitability Foreign members on Board Board composition CEO duality Institutional shareholding Managerial share holding Audit committee composition <b>Observations:</b> Adj. R <sup>2</sup> 0.61 F-Value 18.64	+ + + + + - - - -	Sig. Sig. Sig. Sig. Not Sig. Not Sig. Sig. Not Sig. Not Sig. Not Sig.
11	Muhammad (2015)	Nigeria	Population 11, Sample 6, Descriptive statistics, Correlation and regression analysis	15 Items	Board size Women on board Board independence Managerial ownership Firm Size	+ + + - - -	Sig. Sig. Not Sig. Not Sig. Not Sig.
12	Rufino, & Machado (2015)	Brazil	Sample 100, Correlation Analysis, Descriptive Statistics and Multivariate Regression Analysis.	34 items	Firm Size Reputation Regulated Sector Ownership Concentration. Profitability Leverage <b>Observations:</b> R <sup>2</sup> 0.248 Adj. R <sup>2</sup> 0.225	+ + + + - -	Sig. Sig. Sig. Not Sig. Sig. Not Sig.
13	Rahayu Abdull Razak (2015)	Saudi Arabia	Sample 166, Parson correlation, multiple Regression Analysis (OLS) and Descriptive statistics	262 Items	Size Profitability Environmental sensitivity Consumer proximity Leverage <b>Observations:</b> Adj. R <sup>2</sup> 0.14 F-Value 6.846	+ + + - -	Sig. Sig. Not Sig. Not Sig. Not Sig.

14	Tita Deitiana (2015)	Indonesia	Sample 16, Multiple regression analysis, normality test, heteroscedasticity test, multicollinearity, autocorrelation	79 items	Firm size Media Exposure Board of Commissioners Public Share Profitability Leverage Growth Rate Market Capitalization	+ + + + - - - -	Sig. Sig. Sig. Not Sig. Not Sig. Not Sig. Not Sig. Not Sig.
15	Wisuttorn (2015)	Thailand	Sample 323, Cross sectional Analysis, Pooled ordinary least square (Random and fixed effect) Analysis	45 items	Firm Size. Age of the Firm No. of Independent Directors Return on Assets (ROA) Net Profit Margin (NPM) Tobin's Q. Earnings Per Share (EPS) Leverage	+ + + + + - - -	Sig. Sig. Sig. Sig. Sig. Not Sig. Not Sig. Not Sig.
16	Ibrahim, Mohamad, Yunus, & Norwani (2014)	Malaysia	Sample 154, Content analysis and Pearson correlation	2,521 Sentences	Firm size Profitability Firm's leverage	+ + +	Sig. Not Sig. Not Sig.
17	Juhmani (2014)	Bahrain	Population 48, Sample 33, Pearson correlation, descriptive statistics and multiple regression.	22 items	Profitability Audit firm size Leverage Age Firm size <b>Observations:</b> R <sup>2</sup> 0.295 Adj. R <sup>2</sup> 0.164	+ + + + -	Not Sig. Sig. Sig. Not Sig. Not Sig.
18	Kansal, Joshi, & Batra (2014)	India	Sample 80, Pearson Correlation, Descriptive Statistics, Univariate and Multiple Regression Analysis.	96 items	Industry Affiliation Corporate Reputation Financial Performance Age of the Firm Firm Size <b>Observations:</b> Adj. R <sup>2</sup> 0.297	+ + + + -	Sig. Sig. Not Sig. Not Sig. Not Sig.
19	Kurawa, & Kabara (2014)	Nigeria	Sample 7. Descriptive statistics and Regression Analysis.		Ownership concentration Board composition Managerial ownership CEO duality	+ + - -	Sig. Not Sig. Not Sig. Not Sig.
20	Skouloudis, et al (2014)	Greece	Sample 100, Descriptive statistics, Multivariate and Multiple regression	54 items	Size Internationalization Profitability <b>Observations:</b> R <sup>2</sup> 0.539	+ + -	Sig. Sig. Not Sig.
21	Sulaimana, Abdullah, & Fatima (2014)	Malaysia	Sample 164, Spearman's Correlation, Descriptive	39 items	Firm Size Leverage Profitability Share Ownership Dist.	+ + - -	Sig. Sig. Not Sig. Not Sig.

			Statistics and Multiple Regression		<b>Observations:</b> R <sup>2</sup> 0.266 Adj. R <sup>2</sup> 0.240		
22	Abu Sufian, & Zahan (2013)	Dhaka	Population 254, Sample 70, Pearson Correlation Analysis, Descriptive Statistics and Multivariate Regression	7 items	Ownership Concentration. Number of Shareholders Foreign Ownership Board Size <b>Observations:</b> R <sup>2</sup> 0.117	+ + + -	Sig. Not Sig. Not Sig. Not Sig.
23	Ebiringa, Yadirichukwu, Chigbu, & Obi (2013)	Nigeria	Sample 20, Pearson Correlation Analysis, Descriptive Statistics and OLS Regression Analysis	22 items	Profitability Company Origin Firm Size <b>Observations:</b> R <sup>2</sup> 0.433 Adj. R <sup>2</sup> 0.282	+ + -	Sig. Sig. Not Sig.
24	Farouk, & Hassan (2013)	Nigeria	Population 21, Sample 13, Pearson Correlation two-tailed, Descriptive Statistics, and Multiple Regression.		Firm Size Leverage Growth Dividend Payout Ratio Profitability Institutional Ownership <b>Observations:</b> R <sup>2</sup> 0.320 Adj. R <sup>2</sup> 0.271	+ + + + + +	Sig. Sig. Sig. Sig. Sig. Sig.
25	Naser, & Hassan (2013)	UAE	Population 65, Sample 60, Pearson Correlation, Descriptive Statistics, and Backward Regression Analysis.	26 items	Firm size Industry Type Status Audit firm Location of the Head Office Ownership Structure Profitability Leverage <b>Observations:</b> R <sup>2</sup> 0.452 Adj. R <sup>2</sup> 0.379	+ + + + + - -	Sig. Sig. Not Sig. Not Sig. Not Sig. Sig. Not Sig.
26	Wang, Jiaotong, Song, & Yao, (2013)	China	Population 856, Sample 800, Pearson Correlation, Descriptive Statistics, and Multivariate Regression.	26 items	Firm size Media Exposure Ownership Concentration Institutional Shareholding Age of the Firm <b>Observations:</b> Adj. R <sup>2</sup> 0.232	+ + + + -	Sig. Sig. Sig. Sig. Sig.
27	AL- Shubiri, Al-abadallat, & Abu Orabi (2012)	Jordan	Sample 60, Pearson Correlation, Descriptive Statistics, and Multiple Regression		Firm Size Growth Age of the Firm Individual Shareholders Institutional shareholders Majority Shareholders Leverage	+ + + + + +	Sig. Sig. Sig. Not Sig. Not Sig. Not Sig. Sig.

			Analysis.		Dividend Payout Ratio <b>Observations:</b> R <sup>2</sup> 0.522 Adj. R <sup>2</sup> 0.402	-	Not Sig.
28	Setyorini, & Ishak (2012)	Indonesia	Population 398, Descriptive statistics and multivariate regression analysis	911 observations	Firm size Profitability (ROA) Firm's bonus plan Earning management <b>Observations:</b> Adj. R <sup>2</sup> (2008) 0.547 Adj. R <sup>2</sup> (2007) 0.148	+	Sig. Sig. Sig. Sig.
29	Suttipun, & Stanton (2012)	Thailand	Sample 75, Pearson Correlation, Descriptive Statistics and Multiple Regression.	22 items	Firm Size Industry Type Country of the Company Profitability Ownership Status	+	Sig. Not Sig. Not Sig. Not Sig. Not Sig.
30	Uwugbe, & Egbide (2012)	Nigeria	Sample 41, Multiple Regression and Pearson correlation analysis	28 items	Financial Performance. Size of Audit Firm. Financial Leverage. <b>Observations:</b> Adj. R <sup>2</sup> 0.59 F- Value 4.531	+	Sig. Sig. Sig.
31	Yee, Yen, Kian, Von, & Keong (2012)	Malaysia	Population 954, Sample 210, Pearson Correlation, Descriptive Statistics and Multiple Regression.	5 items	Firm Size Dependence on Government Industry Type Profitability Share Return <b>Observations:</b> R <sup>2</sup> 0.198 Adj. R <sup>2</sup> 0.178	+	Sig. Sig. Not Sig. Not Sig. Not Sig.
32	Arshad, & Vakhidulla (2011)	Sweedn	Sample 25, Pearson Correlation, Descriptive Statistics and Regression Analysis.	11 items	Firm Size Industry Sensitivity Media Exposure Profitability Ownership Identity Ownership Concentration	+	Sig. Sig. Sig. Not Sig. Not Sig. Not Sig.
33	Hussainey, Elsayed, & Abdel-Razik, (2011)	Egypt	Sample 111, Correlation Analysis, Descriptive Statistics and Multiple Regression Analysis		Profitability Firm Size Ownership Type Type of Audit Firm Leverage Gearing <b>Observations:</b> Adj. R <sup>2</sup> 0.086	+	Sig. Not Sig. Not Sig. Not Sig. Not Sig. Not Sig.
34	Yao, Wang, & Song (2011)	China	Sample 800, Correlation Analysis, Descriptive Statistics and Multivariate Regression	20 items	Firm Size Media Exposure Ownership Concentration. Institutional Shareholding Firm Age Env. sensitive Industries Cons. Sensitive Industries	+	Sig. Sig. Sig. Sig. Sig. Not Sig. Not Sig.

			Analysis.		<b>Observations:</b> Adj. R <sup>2</sup> 0.23		
35	Bahrie Lecaj, & Mathias Heinrich (2010)	Sweeden & Germany	Population 558, Sample 215, Multiple Regression Analysis and Pearson correlation analysis.	5 items	Industry Type. Firm Size. Listing status. Ownership Structures. Profitability. Financial Leverage. <b>Observations:</b> Adj. R <sup>2</sup> 0.356	+ + + + + -	Sig. Sig. Sig. Not Sig. Not Sig. Not Sig.
36	Khemir, & Baccouche (2010)	Tunisia	Sample 23, Pearson correlation, descriptive statistics and multiple regression		Economic Performance (ROE) Economic Performance(ROA) Capital Structure Internationalization degree Debt level Political visibility: Log of sale Log of total Assets	+ + + + + +	Not Sig. Not Sig. Not Sig. Sig. Sig. Sig. Not Sig.
37	Reverte (2009)	Spain	Sample 46, Pearson Correlation, Descriptive Statistics, and Linear Regression Analysis.		Firm Size Media Exposure Industry Sensitivity Profitability Leverage International Listing Ownership Concentration <b>Observations:</b> Adj. R <sup>2</sup> 0.475	+ + + + - - -	Sig. Sig. Sig. Not Sig. Not Sig. Not Sig. Not Sig.
38	Tagesson, Blank, Broberg, & Collin (2009)	Sweeden	Sample 267, Pearson Correlation, Descriptive Statistics and multiple Regression Analysis.		Firm Size Profitability Ownership Concentration	+ + +	Sig. Sig. Not Sig.

## APPENDIX II

S/N	CSR D ITEMS	
<b>I</b>		<b>Employee Information:</b>
1	1	Non discrimination in Hiring of Staff
2	2	Information about Disabled Persons, Women or Minorities in the Workforce
3	3	Occupation of Women or Minorities in Management Positions
4	4	Turnover Rate and Resignation Policy
5	5	Number of Employees in the entire workforce
6	6	Managerial Remuneration
7	7	Employees Involvement / Participation in Management Decisions
8	8	Employee Training and Development
9	9	Retirement and Complementary Social Security Plans
10	10	Employee Welfare
11	11	Employee Health
12	12	Employee safety and Environment
13	13	Employee Education
14	14	Employee and Management Relation
15	15	Award program for employees
16	16	Grants / Scholarship for Children of Employees
17	17	Profile of Key Management Staff / Board Members
18	18	Attendance at Management / Board Meetings during the reporting year
<b>II</b>	<b>19</b>	<b>Company's Distribution Network</b>
<b>III</b>	<b>20</b>	<b>Company's Major Supplier(s)</b>
<b>IV</b>	<b>21</b>	<b>Compliance with Corporate Governance Code</b>
<b>V</b>		<b>Community Involvement / Development:</b>
1	22	Charitable Donations and Subscriptions
2	23	Sponsorships of Sports, Art & Cultural programs
3	24	Sponsorship of Community Program (Health)
4	25	Grants to Public Universities and Tertiary Institutions
<b>VI</b>		<b>Environmental Information:</b>
1	26	Environ policies
2	27	Fines to the Host Community where Company Operates
<b>VII</b>		<b>Product and service information:</b>
1	28	Types of product Manufactured / Traded by the Company
2	29	Product Research and Development
3	30	Product Quality and Safety
4	31	Customer Service and Satisfaction
5	32	Products Compliance with Safety Standards
<b>VIII</b>		<b>Energy Responsibility:</b>
1	33	Pollution Control or Repair of Environmental Damage
2	34	Energy Saving / Emission Reduction
3	35	Environmental Conservation
4	36	Conserving Natural Resources
5	37	Solid waste disposal information

SOURCE: (Muhammad, (2015), Abu-Sufian & Zahan (2013), Wang & Song (2011) and Rufino & Machado 2015)

## APPENDIX III DATA ANALYSIS

```
_____ (R)
/_____/ /_____/
_____/ /_____/ /_____/ 13.0 Copyright 1985-2013 StataCorp LP
Statistics/Data Analysis StataCorp
4905 Lakeway Drive
MP - Parallel Edition College Station, Texas 77845 USA
800-STATA-PC http://www.stata.com
979-696-4600 stata@stata.com
979-696-4601 (fax)
```

3-user 8-core Stata network perpetual license:

Serial number: 501306208483

Licensed to: Sunusi Madaki

AMINU KANO TEACHING HOSPITAL

Notes:

1. (/v# option or -set maxvar-) 5000 maximum variables
- ```
. *(14 variables, 96 observations pasted into data editor)
. xtset coy years, yearly
panel variable: coy (strongly balanced)
time variable: years, 2006 to 2017
delta: 1 year
```

**APPENDIX III (A)**

. summarize csr di iso mso bg bs roa liq eps lev size age

| Variable    | Obs | Mean     | Std. Dev. | Min       | Max      |
|-------------|-----|----------|-----------|-----------|----------|
| -----+----- |     |          |           |           |          |
| csr di      | 96  | .5219595 | .283904   | 0         | .8648649 |
| iso         | 96  | .5280492 | .2149184  | .0562489  | .7747122 |
| mso         | 96  | .0490485 | .0885044  | .0000456  | .6002586 |
| bg          | 96  | .0962576 | .0918424  | 0         | .3       |
| bs          | 96  | 8.625    | 2.407226  | 4         | 16       |
| -----+----- |     |          |           |           |          |
| roa         | 96  | .0434123 | .1301983  | -.7127247 | .2396284 |
| liq         | 96  | 1.811672 | 5.646585  | .2451145  | 49.18209 |
| eps         | 96  | 4.727307 | 7.678798  | -16.03304 | 43.58216 |
| lev         | 96  | .5244377 | .7312632  | .0104031  | 5.213012 |
| size        | 96  | 10.68831 | .511424   | 9.08226   | 12.01711 |
| -----+----- |     |          |           |           |          |
| age         | 96  | 24.47917 | 10.59591  | 1         | 39       |

. xtsum csr di iso mso bg bs roa liq eps lev size age

| Variable    |         | Mean     | Std. Dev. | Min       | Max      | Observations |
|-------------|---------|----------|-----------|-----------|----------|--------------|
| -----+----- |         |          |           |           |          |              |
| csr di      | overall | .5219595 | .283904   | 0         | .8648649 | N = 96       |
|             | between |          | .2047436  | .231982   | .7387387 | n = 8        |
|             | within  |          | .2086514  | -.0726351 | 1.030968 | T = 12       |
|             |         |          |           |           |          |              |
| iso         | overall | .5280492 | .2149184  | .0562489  | .7747122 | N = 96       |
|             | between |          | .2088234  | .0977668  | .744073  | n = 8        |
|             | within  |          | .087361   | .2372962  | .8434363 | T = 12       |
|             |         |          |           |           |          |              |

|      |         |  |          |          |           |          |  |     |    |
|------|---------|--|----------|----------|-----------|----------|--|-----|----|
| mso  | overall |  | .0490485 | .0885044 | .0000456  | .6002586 |  | N = | 96 |
|      | between |  |          | .0424399 | .0002165  | .1050696 |  | n = | 8  |
|      | within  |  |          | .0789964 | -.0359888 | .5641307 |  | T = | 12 |
|      |         |  |          |          |           |          |  |     |    |
| bg   | overall |  | .0962576 | .0918424 | 0         | .3       |  | N = | 96 |
|      | between |  |          | .0632279 | 0         | .1800325 |  | n = | 8  |
|      | within  |  |          | .0700012 | -.078553  | .265702  |  | T = | 12 |
|      |         |  |          |          |           |          |  |     |    |
| bs   | overall |  | 8.625    | 2.407226 | 4         | 16       |  | N = | 96 |
|      | between |  |          | 2.13809  | 5.666667  | 12       |  | n = | 8  |
|      | within  |  |          | 1.32387  | 6.041667  | 12.625   |  | T = | 12 |
|      |         |  |          |          |           |          |  |     |    |
| roa  | overall |  | .0434123 | .1301983 | -.7127247 | .2396284 |  | N = | 96 |
|      | between |  |          | .0734954 | -.0899356 | .1576351 |  | n = | 8  |
|      | within  |  |          | .1103425 | -.5793769 | .2445641 |  | T = | 12 |
|      |         |  |          |          |           |          |  |     |    |
| liq  | overall |  | 1.811672 | 5.646585 | .2451145  | 49.18209 |  | N = | 96 |
|      | between |  |          | 2.222066 | .5999458  | 7.273557 |  | n = | 8  |
|      | within  |  |          | 5.245767 | -4.792063 | 43.72021 |  | T = | 12 |
|      |         |  |          |          |           |          |  |     |    |
| eps  | overall |  | 4.727307 | 7.678798 | -16.03304 | 43.58216 |  | N = | 96 |
|      | between |  |          | 6.062697 | -.5221872 | 16.08686 |  | n = | 8  |
|      | within  |  |          | 5.144281 | -13.4148  | 32.22261 |  | T = | 12 |
|      |         |  |          |          |           |          |  |     |    |
| lev  | overall |  | .5244377 | .7312632 | .0104031  | 5.213012 |  | N = | 96 |
|      | between |  |          | .3530109 | .1266718  | 1.081435 |  | n = | 8  |
|      | within  |  |          | .6515815 | -.4881801 | 4.656015 |  | T = | 12 |
|      |         |  |          |          |           |          |  |     |    |
| size | overall |  | 10.68831 | .511424  | 9.08226   | 12.01711 |  | N = | 96 |

|     |         |  |          |          |          |    |     |        |
|-----|---------|--|----------|----------|----------|----|-----|--------|
|     | between |  | .4522419 | 10.11801 | 11.63963 |    | n = | 8      |
|     | within  |  | .2841009 | 9.652555 | 11.25195 |    | T = | 12     |
|     |         |  |          |          |          |    |     |        |
| age | overall |  | 24.47917 | 10.59591 | 1        | 39 |     | N = 96 |
|     | between |  | 10.65715 | 6.5      | 33.5     |    | n = | 8      |
|     | within  |  | 3.442255 | 18.97917 | 29.97917 |    | T = | 12     |

. . corr csr di iso mso bg bs roa liq eps lev size age

(obs=96)

|        | csr di  | iso     | mso     | bg      | bs      | roa     | liq     | eps     | lev     | size   | age    |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|
| csr di | 1.0000  |         |         |         |         |         |         |         |         |        |        |
| iso    | 1.0000  | 1.0000  |         |         |         |         |         |         |         |        |        |
| mso    | -0.0122 | -0.0122 | 1.0000  |         |         |         |         |         |         |        |        |
| bg     | 0.1633  | 0.1633  | -0.0058 | 1.0000  |         |         |         |         |         |        |        |
| bs     | 0.0421  | 0.0421  | -0.1064 | 0.2047  | 1.0000  |         |         |         |         |        |        |
| roa    | 0.4349  | 0.4349  | -0.0548 | -0.0185 | -0.0891 | 1.0000  |         |         |         |        |        |
| liq    | 0.1459  | 0.1459  | 0.1596  | 0.0550  | -0.1054 | 0.0196  | 1.0000  |         |         |        |        |
| eps    | 0.3106  | 0.3106  | -0.2177 | -0.2058 | -0.0227 | 0.5457  | -0.0578 | 1.0000  |         |        |        |
| lev    | -0.1997 | -0.1997 | -0.0443 | 0.0423  | 0.0257  | -0.3152 | 0.0643  | -0.2298 | 1.0000  |        |        |
| size   | 0.1077  | 0.1077  | -0.2301 | 0.4846  | 0.5348  | -0.0518 | 0.0143  | 0.0812  | 0.2632  | 1.0000 |        |
| age    | 0.7358  | 0.7358  | -0.1300 | 0.2324  | 0.0042  | 0.2945  | 0.1527  | 0.4692  | -0.0234 | 0.3167 | 1.0000 |

```
. sktest csr di iso mso bg bs roa liq eps lev size age
```

Skewness/Kurtosis tests for Normality

| Variable | Obs | Pr(Skewness) | Pr(Kurtosis) | adj chi2(2) | Prob>chi2 |
|----------|-----|--------------|--------------|-------------|-----------|
| csr di   | 96  | 0.0019       | 0.0044       | 14.38       | 0.0008    |
| iso      | 96  | 0.0001       | 0.6338       | 12.38       | 0.0020    |
| mso      | 96  | 0.0000       | 0.0000       | 72.09       | 0.0000    |
| bg       | 96  | 0.0264       | 0.0385       | 8.19        | 0.0167    |
| bs       | 96  | 0.1704       | 0.3784       | 2.73        | 0.2554    |
| roa      | 96  | 0.0000       | 0.0000       | 64.61       | 0.0000    |
| liq      | 96  | 0.0000       | 0.0000       | .           | 0.0000    |
| eps      | 96  | 0.0000       | 0.0000       | 33.67       | 0.0000    |
| lev      | 96  | 0.0000       | 0.0000       | .           | 0.0000    |
| size     | 96  | 0.4398       | 0.0105       | 6.63        | 0.0363    |
| age      | 96  | 0.0535       | 0.0014       | 11.61       | 0.0030    |

APPENDIX III (B)

```
. . spearman csr di iso mso bg bs roa liq eps lev size age (obs=96)
```

|        | csr di  | iso     | mso     | bg      | bs      | roa     | liq     | eps    | lev    | size   | age    |
|--------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| csr di | 1.0000  |         |         |         |         |         |         |        |        |        |        |
| iso    | 1.0000  | 1.0000  |         |         |         |         |         |        |        |        |        |
| mso    | -0.0591 | -0.0591 | 1.0000  |         |         |         |         |        |        |        |        |
| bg     | 0.1590  | 0.1590  | -0.0553 | 1.0000  |         |         |         |        |        |        |        |
| bs     | 0.1324  | 0.1324  | -0.2243 | 0.1828  | 1.0000  |         |         |        |        |        |        |
| roa    | 0.3042  | 0.3042  | -0.3640 | -0.1388 | -0.1710 | 1.0000  |         |        |        |        |        |
| liq    | 0.2295  | 0.2295  | 0.3660  | -0.0139 | -0.1121 | 0.0404  | 1.0000  |        |        |        |        |
| eps    | 0.4199  | 0.4199  | -0.4438 | -0.1014 | 0.0659  | 0.7548  | -0.0655 | 1.0000 |        |        |        |
| lev    | -0.1007 | -0.1007 | -0.2975 | -0.0583 | -0.0520 | 0.0593  | -0.4788 | 0.0513 | 1.0000 |        |        |
| size   | 0.2380  | 0.2380  | -0.1615 | 0.4266  | 0.5285  | -0.2137 | -0.0877 | 0.2352 | 0.0812 | 1.0000 |        |
| age    | 0.6127  | 0.6127  | -0.2121 | 0.2529  | -0.0455 | 0.3150  | 0.0004  | 0.5901 | 0.1317 | 0.3957 | 1.0000 |

```
. reg csr di iso mso bg bs roa liq eps lev size age
```

| Source      | SS         | df | MS         | Number of obs = | 96     |
|-------------|------------|----|------------|-----------------|--------|
| -----+----- |            |    |            |                 |        |
| Model       | 3.24308879 | 10 | .324308879 | F( 10, 85) =    | 6.25   |
| Residual    | 4.41405143 | 85 | .051930017 | Prob > F =      | 0.0000 |
| -----+----- |            |    |            |                 |        |
| Total       | 7.65714022 | 95 | .080601476 | R-squared =     | 0.4235 |
| -----+----- |            |    |            |                 |        |
|             |            |    |            | Adj R-squared = | 0.3557 |
|             |            |    |            | Root MSE =      | .22788 |

| csr di      | Coef.     | Std. Err. | t     | P> t  | [95% Conf. Interval] |           |
|-------------|-----------|-----------|-------|-------|----------------------|-----------|
| -----+----- |           |           |       |       |                      |           |
| iso         | .8980064  | .1873074  | 4.79  | 0.000 | .5255891             | 1.270424  |
| mso         | .2521031  | .282265   | 0.89  | 0.374 | -.3091153            | .8133215  |
| bg          | 1.214868  | .3265946  | 3.72  | 0.000 | .5655108             | 1.864226  |
| bs          | -.0026599 | .0123104  | -0.22 | 0.829 | -.0271362            | .0218164  |
| roa         | -.6532321 | .2433082  | -2.68 | 0.009 | -1.136994            | -.1694702 |
| liq         | .005736   | .0043308  | 1.32  | 0.189 | -.0028748            | .0143467  |
| eps         | .0102409  | .0046417  | 2.21  | 0.030 | .0010121             | .0194698  |
| lev         | -.0932976 | .0367506  | -2.54 | 0.013 | -.1663676            | -.0202275 |
| size        | .0936144  | .0713708  | 1.31  | 0.193 | -.0482898            | .2355186  |
| age         | -.017033  | .0041776  | -4.08 | 0.000 | -.0253392            | -.0087268 |
| _cons       | -.6237374 | .6833465  | -0.91 | 0.364 | -1.982413            | .7349385  |

### APPENDIX III (B)

```
. vif
```

| Variable | VIF  | 1/VIF    |
|----------|------|----------|
| age      | 3.58 | 0.278974 |
| iso      | 2.96 | 0.337317 |
| size     | 2.44 | 0.410291 |
| eps      | 2.32 | 0.430292 |
| roa      | 1.84 | 0.544717 |
| bg       | 1.65 | 0.607562 |
| bs       | 1.61 | 0.622472 |
| lev      | 1.32 | 0.756866 |
| mso      | 1.14 | 0.875894 |
| liq      | 1.09 | 0.914090 |
| Mean VIF | 2.00 |          |

```
. hettest
```

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
```

```
Ho: Constant variance
```

```
Variables: fitted values of csrdi
```

```
chi2(1) = 3.14
```

```
Prob > chi2 = 0.0766
```

```
. reg csr di iso mso bg bs roa liq eps lev size age, robust
```

Linear regression

```
Number of obs =      96
F( 10,      85) =   10.89
Prob > F       =   0.0000
R-squared      =   0.4235
Root MSE      =   .22788
```

```
-----+-----
```

|        | Robust    |           |       |       |                      |           |
|--------|-----------|-----------|-------|-------|----------------------|-----------|
| csr di | Coef.     | Std. Err. | t     | P> t  | [95% Conf. Interval] |           |
| iso    | .8980064  | .1483999  | 6.05  | 0.000 | .6029477             | 1.193065  |
| mso    | .2521031  | .166684   | 1.51  | 0.134 | -.0793093            | .5835156  |
| bg     | 1.214868  | .2933722  | 4.14  | 0.000 | .6315658             | 1.798171  |
| bs     | -.0026599 | .0112788  | -0.24 | 0.814 | -.0250851            | .0197653  |
| roa    | -.6532321 | .2670692  | -2.45 | 0.017 | -1.184237            | -.1222269 |
| liq    | .005736   | .0028121  | 2.04  | 0.044 | .0001448             | .0113271  |
| eps    | .0102409  | .0040371  | 2.54  | 0.013 | .0022142             | .0182677  |
| lev    | -.0932976 | .0347835  | -2.68 | 0.009 | -.1624564            | -.0241387 |
| size   | .0936144  | .0725832  | 1.29  | 0.201 | -.0507005            | .2379292  |
| age    | -.017033  | .0033575  | -5.07 | 0.000 | -.0237086            | -.0103574 |
| _cons  | -.6237374 | .6802703  | -0.92 | 0.362 | -1.976297            | .7288221  |

```
-----+-----
```

```
. predict e
```

(option xb assumed; fitted values)

```
. sktest e,
```

```
Skewness/Kurtosis tests for Normality ----- joint -----
```

| Variable | Obs | Pr(Skewness) | Pr(Kurtosis) | adj chi2(2) | Prob>chi2 |
|----------|-----|--------------|--------------|-------------|-----------|
| e        | 96  | 0.0829       | 0.3447       | 4.02        | 0.1343    |

```
. rreg csrdi iso mso bg bs roa liq eps lev size age
```

```
Huber iteration 1: maximum difference in weights = .52346899
```

```
Huber iteration 2: maximum difference in weights = .11450432
```

```
Huber iteration 3: maximum difference in weights = .01961266
```

```
Biweight iteration 4: maximum difference in weights = .15722835
```

```
Biweight iteration 5: maximum difference in weights = .00816806
```

```
Robust regression
```

```
Number of obs = 96
```

```
F( 10, 85) = 6.08
```

```
Prob > F = 0.0000
```

---

| csrdi | Coef.     | Std. Err. | t     | P> t  | [95% Conf. Interval] |
|-------|-----------|-----------|-------|-------|----------------------|
| iso   | .8719154  | .1919093  | 4.54  | 0.000 | .4903484 1.253483    |
| mso   | .1164099  | .2891998  | 0.40  | 0.688 | -.4585968 .6914167   |
| bg    | 1.335528  | .3346185  | 3.99  | 0.000 | .6702169 2.000839    |
| bs    | .0052077  | .0126128  | 0.41  | 0.681 | -.01987 .0302853     |
| roa   | -.6450411 | .2492859  | -2.59 | 0.011 | -1.140688 -.1493938  |
| liq   | .005387   | .0044372  | 1.21  | 0.228 | -.0034353 .0142094   |
| eps   | .0110002  | .0047557  | 2.31  | 0.023 | .0015446 .0204558    |
| lev   | -.0930806 | .0376535  | -2.47 | 0.015 | -.1679458 -.0182153  |
| size  | .0361221  | .0731242  | 0.49  | 0.623 | -.1092684 .1815127   |
| age   | -.0152793 | .0042802  | -3.57 | 0.001 | -.0237895 -.006769   |
| _cons | -.0920619 | .7001353  | -0.13 | 0.896 | -1.484119 1.299995   |

---

**APPENDIX III (C)**

```
. xtreg csr di iso mso bg bs roa liq eps lev size age
```

```
Random-effects GLS regression           Number of obs   =           96
Group variable: coy                     Number of groups =            8
R-sq:  within = 0.1206                  Obs per group:  min =           12
                    between = 0.8843                                avg =           12.0
                    overall = 0.4235                                max =           12
   Wald chi2(10)    =           62.45
corr(u_i, X) = 0 (assumed)              Prob > chi2     =           0.0000
```

```
-----+-----
```

| csr di | Coef.     | Std. Err. | z     | P> z  | [95% Conf. Interval] |           |
|--------|-----------|-----------|-------|-------|----------------------|-----------|
| iso    | .8980064  | .1873074  | 4.79  | 0.000 | .5308906             | 1.265122  |
| mso    | .2521031  | .282265   | 0.89  | 0.372 | -.3011261            | .8053323  |
| bg     | 1.214868  | .3265946  | 3.72  | 0.000 | .5747547             | 1.854982  |
| bs     | -.0026599 | .0123104  | -0.22 | 0.829 | -.0267878            | .0214679  |
| roa    | -.6532321 | .2433082  | -2.68 | 0.007 | -1.130107            | -.1763568 |
| liq    | .005736   | .0043308  | 1.32  | 0.185 | -.0027522            | .0142242  |
| eps    | .0102409  | .0046417  | 2.21  | 0.027 | .0011435             | .0193384  |
| lev    | -.0932976 | .0367506  | -2.54 | 0.011 | -.1653274            | -.0212677 |
| size   | .0936144  | .0713708  | 1.31  | 0.190 | -.0462698            | .2334985  |
| age    | -.017033  | .0041776  | -4.08 | 0.000 | -.025221             | -.0088451 |
| _cons  | -.6237374 | .6833465  | -0.91 | 0.361 | -1.963072            | .7155971  |

```
-----+-----
```

|         |                                     |
|---------|-------------------------------------|
| sigma_u | 0                                   |
| sigma_e | .20658035                           |
| rho     | 0 (fraction of variance due to u_i) |

```
-----+-----
```

```
. estimate store re
```

```

. xtreg csr di iso mso bg bs roa liq eps lev size age, fe
Fixed-effects (within) regression      Number of obs      =      96
Group variable: coy                    Number of groups   =      8
R-sq:  within = 0.1952                 Obs per group: min =      12
      between = 0.1498                  avg =             12.0
      overall = 0.1684                  max =             12
  F(10,78)          =      1.89
corr(u_i, Xb) = -0.1423                 Prob > F           =      0.0588

```

```

-----+-----
      csr di |      Coef.   Std. Err.      t    P>|t|    [95% Conf. Interval]
-----+-----
      iso |   .5598732   .2988882     1.87   0.065   - .0351674   1.154914
      mso |   .3583078   .3003431     1.19   0.236   - .2396294   .9562449
      bg  |   .2401411   .3683155     0.65   0.516   - .4931188   .9734009
      bs  |  -.0135073   .0194402    -0.69   0.489   - .0522097   .0251952
      roa |  -.4578282   .2661509    -1.72   0.089   - .987694    .0720375
      liq |  -.0002835   .0043398    -0.07   0.948   - .0089233   .0083563
      eps |   .0119233   .0054577     2.18   0.032   .0010579    .0227886
      lev |  -.0684112   .0365648    -1.87   0.065   - .1412062   .0043838
      size |   .0641384   .1458431     0.44   0.661   - .2262129   .3544897
      age |  -.003378    .0143878    -0.23   0.815   - .0320219   .0252659
      _cons | -.3008096   1.322919    -0.23   0.821   -2.934539    2.33292

```

```

-----+-----
      sigma_u |   .19217295
      sigma_e |   .20658035
      rho    |   .46391599   (fraction of variance due to u_i)

```

```

-----+-----
F test that all u_i=0:      F(7, 78) =      3.63      Prob > F = 0.0019

```

```

. estimate store fe

```

```
. hausman fe re
```

```
----- Coefficients -----
```

|      | (b)       | (B)       | (b-B)      | sqrt(diag(V_b-V_B)) |
|------|-----------|-----------|------------|---------------------|
|      | fe        | re        | Difference | S.E.                |
| iso  | .5598732  | .8980064  | -.3381332  | .2329164            |
| mso  | .3583078  | .2521031  | .1062046   | .1026277            |
| bg   | .2401411  | 1.214868  | -.9747272  | .1702713            |
| bs   | -.0135073 | -.0026599 | -.0108474  | .0150458            |
| roa  | -.4578282 | -.6532321 | .1954039   | .1078769            |
| liq  | -.0002835 | .005736   | -.0060194  | .000279             |
| eps  | .0119233  | .0102409  | .0016823   | .0028707            |
| lev  | -.0684112 | -.0932976 | .0248864   | .                   |
| size | .0641384  | .0936144  | -.029476   | .1271866            |
| age  | -.003378  | -.017033  | .013655    | .0137679            |

```
-----
```

b = consistent under Ho and Ha; obtained from xtreg  
B = inconsistent under Ha, efficient under Ho; obtained from xtreg  
Test: Ho: difference in coefficients not systematic

$$\chi^2(10) = (b-B)'[(V_b-V_B)^{-1}](b-B)$$

$$= 34.92$$

$$\text{Prob}>\chi^2 = 0.0001$$

(V\_b-V\_B is not positive definite)