

**CORPORATE GOVERNANCE AND PROMOTION OF ENVIRONMENTAL  
COMPLIANCE IN UGANDA; A CASE OF NATIONAL ENVIRONMENT  
MANAGEMENT AUTHORITY (NEMA).**

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## **DEDICATION**

I am dedicating this work to my Late Dad Dakar Father Albino Okidi and Late Mum Lapwony Jemma Alayno Achieng. They have been a great inspiration and guiding light. Their sacrifice has made me get to this achievement. Also not forgetting the memory of my siblings who have gone to be with Lord Florence, Robert, Justine, Edward, Mark, and Okol.

Furthermore, I am also dedicating this work to my Spouse and lead advisor and partner, Juliet Okot Nafula, and my Children Nisha, Neal, Nolan Aidan, and Alfreda whose inspiration and support challenged me to strive and complete this course.

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## **ABSTRACT**

### **CORPORATE GOVERNANCE AND PROMOTION OF ENVIRONMENTAL COMPLIANCE IN UGANDA; A CASE OF NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY (NEMA).**

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Environment degradation remains a key problem in Uganda, even after government set up the National Environment Management Authority (NEMA) in 1995 to oversee compliance to environmental guidelines and regulations by various stakeholders such as industry. The literature (including reports from NEMA) is replete with evidence of such degradation such as the destruction of swamps to make way for agriculture and industry, the destruction of natural forests by industries and communities, and poor management of industrial waste among others. To fulfill its mandate, NEMA is expected to adopt internationally recognized corporate governance principles in the conduct of its business. Further, NEMA must work closely with other arms of government to enforce compliance with environmental guidelines by various stakeholders.

Based on a mixed research design, this study pursues three specific objectives. First, the study seeks to establish the extent to which the institutional context (other government agencies) curtails or enhances the operations of NEMA. Secondly, the study seeks to establish the extent to which the NEMA Board and Management have applied Corporate Governance (CG) principles. Thirdly, the study seeks to establish whether how Corporate Governance (CG) principles are applied elicits compliance in the industries.

For objective one, interviews were conducted NEMA (N=10) with key informants. Qualitative data analysis using N VIVO was be conducted to see which themes emerge. For objectives two and three Structured Questionnaires were used and data was analyzed using SPSS v20.

Specifically, regression analysis to establish the extent to which Corporate Governance (CG) variables influence compliance was conducted.

Findings from stage one (Qualitative) revealed that institutional bottlenecks were key hindrances to environmental compliance. From Key informants, the study revealed that much as Uganda had good environmental regulations in place, the enforcement of those regulations was a challenge. Institutions were inadequately empowered and financed to enforce compliance. Furthermore, there was also a perception that the environment is a concern of NEMA rather than the host communities.

The second stage of the study (Quantitative) conforms to some of the issues raised in the first stage. The study revealed that there is a positive and significant correlation between policy and training ( $r=0.557$ ;  $r=0.553$ ) respectively. The study further tested the effect using regression models and it revealed that training predicts compliance (Beta=0.325  $p<0.000$ ). Similarly, the policy also influences compliance (Beta=0.337;  $p=0.000$ ). The study therefore highlighted that much as training and environmental policy dimensions were statistically significant, they both drive environmental compliance by 66.2%. Therefore 33.8% of environmental compliance is explained by other factors that are not covered in this study.

Based on the above results, to achieve environmental compliance, there is a need for policymakers to enhance the capacity of environmental enforcement agencies. Secondly, much as some industries indicated having environmental compliance policies in place, there is a need to formulate an economic benefit for compliance to enhance self-compliance among various firms.

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## **ACRONYMS / ABBREVIATIONS**

|         |   |  |
|---------|---|--|
| NEMA    | - | National Environment Management Authority              |
| CG      | - | Corporate Governance                                   |
| OECD    | - | Organization for Economic Co-operation and Development |
| IGG     | - | Inspector General of Police                            |
| CSR     | - | Corporate Social Responsibility                        |
| EPBs    | - | Environment Protection Bureau                          |
| NGO     | - | Non-Government Organization                            |
| GHG     | - | Green House Gas  |
| UMA     | - | Uganda Manufacturers Association                       |
| NEA     | - | National Environment Act                               |
| UN      | - | United Nations   |
| NEMA-KR | - | NEMA-Key Respondent interviews                         |
| IND-FG  | - | Independent Focus Group Discussion                     |
| NEMA-R  | - | NEMA-Respondent Interview                              |

# **CHAPTER I:**

## **INTRODUCTION**

### **1.1 Introduction**

Globally Corporate Governance has been perceived as a set of systems, rules, practices, and processes by which Organizations are directed and controlled. According to the Organization for Economic Co-operation and Development (OECD) an international organization comprising 38 member countries, including developed economies, Good Corporate Governance (CG) is a source of accountability, improves organizational performance, and is a source of competitive advantage in many organizations in both the public and private sector. Corporate Governance (CG) refers to the set of rules, controls, policies, and resolutions put in place (by the Board) to direct corporate behavior. According to Mateo and Dramas (2015), the model of Corporate Governance (CG) in the private sector does not differ greatly from that of the public sector; Corporate Governance (CG) in the public sector aims at developing and improving management and control mechanisms and fulfilling the responsibilities of public personnel in gaining the trust of the citizenry. The proliferation of Corporate Governance (CG) guidelines reflects the importance attached by governments, business firms, and communities to the subject (Ho, 2005). In light of the importance of environmental sustainability, it is only imperative that organizations and agencies tasked with the onerous task of supervising the management of our environment be well grounded in corporate governance practices since the need for environmental preservation is recognized the world over and public authorities (e.g. in USA and Europe) encourage responsible environment behavior through various reforms (Ortiz-de-Mandojana et al., 2016). These reforms are reshaping the competitive landscape thus adding environmental issues to the corporate governance agenda (Tricker 2009). Bold and creative reforms in corporate governance structures and practices are needed to meet current environmental challenges (Ortiz-de-Mandojana et al., 2010).

The interdependence between social, economic, and environmental issues (Goodland, 1995) is agreed upon by all countries of the world and many conventions have been put in place in recognition of this fact. The UN 2030 agenda for sustainable development hinges on the fact that the environment is an integral part of sustainable development, and a third of the 17 goals of this agenda focus on environmental related matters. Environmental challenges are mounting in the

developing world (Zhao et al., 2022), yet the well-being of developing countries is often linked to the state of the natural environment and the opportunities it offers. The natural environment is the provider of the basic elements that human beings need to survive such as food, water and shelter (Ssali, 2020). In developing countries, the relationship between economic activity and environmental degradation could be more harmful to the environment due to the production structure of these countries (Alvarado, 2016). Globalization has also contributed to the problem. There has been an increase in environmental degradation, poor use of global natural resources, and reduced environmental quality due to globalization (Liu et al., 2021). Examples of environmental degradation include air and water pollution, climatic changes, soil degradation, biodiversity loss, deforestation, and desertification among others.

Considering the threat posed by environmental degradation and in keeping with its sustainability agenda, the Government of Uganda (GOU) set up the National Environment Management Authority (NEMA) in May 1995 under Cap 153, became operational in December 1995, and continues to exist under the National Environment Act Cap 5 of 2019 (sections 8 and 9) as a watchdog to protect the environment (nema.go.ug). NEMA is a government agency under the ministry of Water and Environment that approves its policies and laws. NEMA works with the Directorate of Environment Affairs in the implementation and enforcement of the laws especially in wetlands, forests, mountainous areas and water bodies. NEMA is the principal agency charged with the responsibility of coordinating, monitoring, regulating, and supervising environmental management in the country. NEMA spearheads the development of environmental policies, laws, regulations, standards, and guidelines, and guides the Government on sound environment management in Uganda. Section 15 (d and g) of the National Environment Act obliges the Board of Directors of NEMA to monitor and evaluate the performance of the Authority. A major function of NEMA is to promote and monitor environmental compliance and the enforcement of existing laws, standards, guidelines, environmental literacy, and corporate image enhancement (NEMA report, 2022).

## **1.2 Research Problem**

There are many examples of environmental degradation in Uganda, even after the setting up of NEMA by the government. According to Ssali (2020), environmental degradation in greater Kampala (the capital city) has continued to increase and this is attributed to various developmental practices taking place under intriguing circumstances. Environmental degradation

in Kampala and Uganda at large has persisted and continued to worsen since the livelihoods of Uganda's biggest population mostly depend on the natural environment both as a source of subsistence and also as a basis for production. The growth in economic activities such as agriculture and industry have serious environmental consequences which include encroaching on wetlands, wetland degradation, pollution, etc. Industrialization has led to an influx of immigrants resulting in an unplanned housing sector, which is a threat to the environment. The National State of the Environment Report (2018-2019) acknowledges that environmental degradation is rampant in many parts of the country. For instance, soil degradation is a major problem in this country which is attributed to population growth, land tenure, and inefficient land management. The report further acknowledges that wetlands have reduced from 15.5% in 1994 to 13% in 2017. Of the remaining wetlands, 8% is still intact, while 4% is degraded. Unless something is done to reverse this trend, the quality of life of future generations in this country will be at stake. There are three notable positions regarding this problem noted by this paper.

The first notable position is that the effectiveness of the Corporate Governance (CG) structures in adopting decisions that foster environmental sustainability depends a great deal on the national institutional context (Ortiz-de-Mandojana et al., 2016). For example, although legal traditions vary across countries, it is generally agreed that the structure, vigilance, and capacity of the regulatory and judicial framework form an integral part of the Corporate Governance (CG) environment (Jesover and Kirkpatrick, 2005). The Inspector General of Government IGG (2017) and Transparency International (2021) reports rank the Ugandan Police as the most corrupt institution in Uganda. The Inspector General of Government IGG (2017) ranks the Judiciary as the 9th most corrupt government institution in this country. Another institutional aspect is the normative context (social norms, values, and beliefs) which also has a lot to do with environmental issues. Bansal (2003) pays special attention to the importance of normative pressures on the environment. According to Ortiz-de-Mandojana et al., (2016) countries in which society is highly concerned with the environment will define high environmental standards. This does not seem to be the case in Uganda, where people have cut down forests to make charcoal for sale in urban areas. No firm effort has been made by society to stem this threat to the environment.



The second notable position is that Corporate Governance (CG) is based on sound principles, which reflect a global consensus regarding the critical importance of Corporate Governance (CG) in contributing to the economic vitality of world economies. Originally adopted by 30 Organization for Economic Co-operation and Development (OECD) countries in 1999, these principles have gained worldwide acceptance as a benchmark for sound Corporate Governance (CG). These principles are accountability, transparency, fairness, responsibility and risk management provide specific guidance for policymakers, regulators, and other stakeholders in improving the legal and institutional environment that underpins Corporate Governance (CG). To this list, The Organization for Economic Co-operation and Development (OECD), (2015) adds leadership, integrity, capability, and sustainability, however, the main substance and structure remained unchanged. The board governs the activities of the firm by relying on these principles (Ashiru et al., 2019). Some scholars however question the extent to which these principles are applied satisfactorily across the world (Siems & Alvarez-Macotela, 2015). This means that the degree to which these principles are practiced (and even their effectiveness) varies between Organization for Economic Co-operation and Development (OECD) countries and other countries and more so in countries with weak institutional arrangements and especially where corruption exists as is the case in Uganda.

The third notable position is that how NEMA implements the Corporate Governance (CG) principles will elicit compliance or non-compliance with environmental guidelines and regulations among various stakeholders such as industry. Literature holds that perceptions of fairness are positively correlated with compliance (Erich et al., 2006).

This study sets out to investigate these three positions in the Ugandan context, given that most of the literature on Corporate Governance (CG) focuses on the application of Corporate Governance (CG) principles in the business world (firms), ignoring the public sector. Secondly, save for a study on the application of Corporate Governance (CG) principles in Nigeria (Goubadia, 2001), most of the literature focuses on Corporate Governance (CG) in the developed world. Thirdly, most studies on the association between environmental sustainability and corporate governance have been done in countries such as Australia, the UK, Canada, and the US (Ortiz-de-Mandojana et al., 2016) with little attention paid to the developing world (Masud et al., 2018). This study is an attempt to bridge this gap.

### **1.3 Purpose of Research**

In light of these three positions and focusing on industry in particular, this study sets out to examine the extent to which corporate governance structures set up by the NEMA board influence the performance of the Authority in terms of eliciting compliance with environmental guidelines and regulations.

### **1.4 Significance of the Study**

This study will be useful to a number of stakeholders. First, the NEMA Board and Management will find the study useful as it will enable them to understand the factors that constrain or enhance their performance in terms of compliance with environmental guidelines. Government agencies will also get to know what to do to render more support to NEMA. Strategies should then be crafted to enhance environmental sustainability. The study will also be useful to other researchers and parties working on environmental issues in a developing country context.

### **1.5 Research Purpose and Questions**

There are three specific objectives in this study, each specifically linked to the three positions above.

1. The study seeks to establish the extent to which the NEMA applies Corporate Governance (CG) principles.
2. The study seeks to establish the extent to which companies are influenced by Corporate Governance variables (Accountability, Transparency, and Fairness)
3. The study is conducted to verify whether policy-related issues and Training predict compliance with environmental regulations by industries.

Research questions:

1. To what extent does the NEMA practice Corporate Governance (Accountability, Transparency, and Fairness) in the execution of their mandate in eliciting compliance from service and industrial organizations in the study area? (Qualitative study).
2. To what extent are companies influenced by Corporate Governance variables (Accountability, Transparency, and Fairness) as practiced by NEMA in their compliance or non-compliance with environmental regulations?

3. To what degree do policy-related issues and training predict compliance with environmental regulations by industries?

## **CHAPTER II:**

### **REVIEW OF LITERATURE**

#### **2.1 Theoretical Framework**

This chapter looks at the opinions of various scholars on the variables and the interrelationships among them. It also expounds on a theoretical framework that will act as a guide to the current study. The study further provides literature showing the relationships between the variables.

##### **2.1.1 Theoretical Framework**

##### **2.1.2 Stakeholder Theory**

The study was underpinned by the stakeholder theory as the primary theory by Edward Freeman. The theory gained a broad appeal in his book, *Strategic Management: A Stakeholder Approach* (Freeman, 1984). The theory continues to be cited by numerous authors and continues to attract attention from management researchers. The theory offers a pragmatic approach to strategy and urges organizations to be cognizant of stakeholders to achieve their strategic goals. The theory has been recognized to fare well in the mentality of strategically minded organizations. Some organizations have even justified broader social policies and actions not for normative reasons but for strategic purposes.

According to Freeman, 1994, the stakeholder theory pre-supposes that organizations should be managed in the interest of all its constituents, not just in the interest of shareholders. The theory is timely yet adolescent, controversial yet significant. The emergence of formal organizations like the National Environment Management Authority (NEMA) as dominant institutions in our time has made the theory imperative. There have been increasing reports of ethical misconduct and the harmful impact of corporate negligence on the natural environment. Yet the theory itself is adolescent because its empirical validity is yet to be established on several of its key propositions (Jones, 1995). The stakeholder theory is also controversial. It questions the conventional assumption that the pursuit of profit is the preeminent management concern for the

“Single-Valued objectives” of an organization (Jensen, 2002). The theory has also been found to be vital because it seeks to address the often-overlooked sociological questions of how organizations are structured to affect society (Hinings & Greenwood, 2003; Stern & Barley, 1995).

According to Margolis and Walsh (2003), the stakeholder theory is found to incite disagreements over deeply rooted values. The theory’s proponents and detractors are unlikely to converge. Despite the fair share of detractors, the theory rose to prominence largely because it drives organizations by its emotional resonance (Weick, 1999). According to (Freeman, R. E. 2005; Freeman, R., Dodd, R., & Pierce, J. 2000; Freeman, R. E., Harrison, J. S., & Wicks, A. C. 2007) proponents all point to the emergence of concern with Vision, values, and sense of purpose as key stakeholder conversations in organizations. Detractors (Jensen, M. C. 2002) also acknowledge the stakeholder theory as one that taps into the deep emotional commitment of most organizations to the environment.

The stakeholder theory appears to be at a critical junction insofar as it is still seeking to gather momentum in what might be considered mainstream management literature. The theory appears to have plateaued in recent years after receiving peak attention in 1999. On one hand, stakeholder theory has often been the subject of special issues in prestigious management journals, pointing to its perceived importance. On the other hand, few articles appear in mainstream management journals apart from special issues, with published works largely confined to Organizational ethics and society journals.

To take stock of this primary theory for the study, the researcher presents a review of academic journal articles on stakeholder theory using content analysis protocols (Krippendorff, 2004; Weber, 1990). Key themes, trends, and differences within different streams of the theory will be examined to facilitate paradigm development (Pfeffer, 1993). The study also intends to contribute by focusing attention on promising, but less elaborated, aspects of the theory. Furthermore, the study seeks to address gaps in the literature as existing reviews of stakeholder theory are either outdated or incomplete. The last comprehensive review of the academic literature was published more than a decade ago by Donaldson and Preston (1995). This is problematic given stakeholder theory’s increased prominence since 1995. Moreover, recent reviews have focused on specific subthemes or conversations in the theory. Specific examples

include Kaler's (2003, 2006) review focusing on stakeholder theory's usefulness for business ethics research, Stoney and Winstanley's (2001) review focusing on the U.K. practitioner literature, and Walsh's (2004) book review and assessment of the theory's implications for managers seeking to tackle social issues.

### **2.1.3 Agency Theory**

The second theory that will underpin this study will be the agency theory. The theory has been applied in several scientific studies, particularly accounting (Demski and Feltham, 1980), Economics (Spence and Zeckhouser, 1971), marketing (Basu et al., 1985), political science (Mitnick, 1986), finance (Fontrodona and Sison, 2006; Fama, 1980), behavior and organizational culture (Kulik, 2005; Eisenhardt, 1985; Kosnik, 1987) and sociology (Shapiro, 2005; White, 1985). However, there have been controversies over its usefulness, applicability, and validity to this day. The theory was developed in the 1960s and early 1970s by several economists (Arrow, 1971, Wilson, 1968).

The agency theory translates the problem of attitude towards environmental risk either by individuals or organizations (Ross, 1973). The differentiation of objectives inherent to those parties leads to differences in their attitudes. Those are the relations between the principle and agent, metaphorically supported by the contract-oriented behavior of parties who take different attitudes towards risk (Jensen and Meckling, 1976).

The agency relationship arises between two or more parties in a designated agent, acting for the other, called the main field, in a particular decision. The governing Board at NEMA acts on behalf of and protects the interest of stakeholders. Management is then put in place to execute environmental protection policies on behalf of the Board (Eisenhardt, 1989). According to Jensen and Meckling (1976), the agency costs correspond to the sum of the costs of monitoring by the principal (associated with the incentives of the agent and the monitoring process of their activity), expenses of the undertaking by the agent (associated with resources spent by the agent to compensate the principal for inappropriate actions) and residual losses (associated with the degree of divergence between the agent's decisions and the decisions that potentially maximize the wellbeing of the principal).

The link between agency theory and Environmental enforcement is the importance of information on environmental issues. According to Nonaka and Takeuchi (1995), identifies the

importance of information and knowledge to an organization, particularly in the conversion mode. Agency theory assumes the rationality of individuals serving on the Board and management positions, the efficiency in processing information and thus distribution of that information asymmetric across organizations and all other stake holders. According to this study, the Agency theory makes two major contributions: 1) The processing of environmental information as a commodity to stake holders has an associated cost in its creation (Shapiro and Varian, 1999); and 2) Associated environmental risks management impacts the relationship between suppliers of this information (NEMA) and users of this information (Stakeholders). In a volatile and increasingly complex environment, the availability of information and the ability for stakeholders to obtain and manage environmental risk accordingly influences the agency contract. According to McGrath et al. (1981), the focus should be oriented towards having a robust information mechanism that will minimize uncertainty as well as intrinsic risk.

According to Nonaka and Takeuchi, 1995, they identify some sources of divergence of agency theory within the environmental information mechanism. The pronounced process of socialization and externalization brings about divergence. Thus, discrepancies between organizational conditions (Governance) that promote the formation of this knowledge and information on the environment and economic conditions allow the appropriation of value through processes of exploration/exploitation (Crossan et al., 1999).

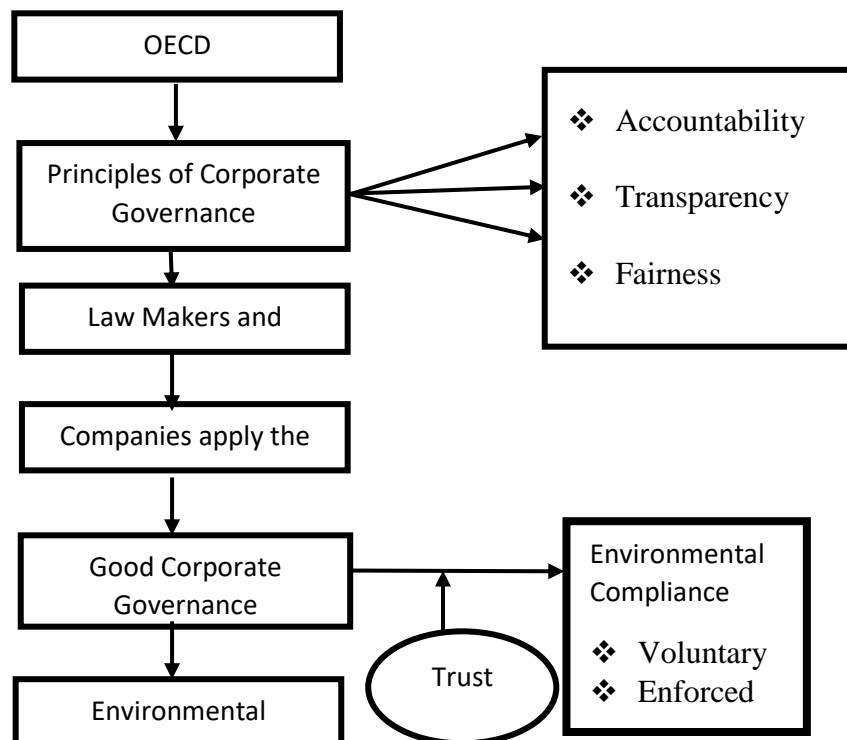
The distinction between implicit and explicit information represents another link between that theory and the creation of information or knowledge on environmental matters. While agency theory in this study focuses on the cost associated with the conversion of environmental information and knowledge, environmental enforcement focuses on mechanism and context that enables or detracts from the conversion process. The conversion mechanism and control of information to stakeholders represents an important strategic effort that can lead to the achievement of key environmental goals as set by the National Environment Management Authority (NEMA). The symbiosis between cognitive and social interactions along the steps of the institution, interpretation of environmental regulations, integration of stakeholders in environmental issues, and institutionalization reduces ambiguity objectively (Crossan et al., 1999).

Therefore, Agency theory incorporates certain control mechanisms like organizational culture and governance structures based primarily on what happens within organizations. According to Wenger, 1998, the transfer mechanisms for environmental knowledge and information emphasizes the relevance of external control mechanism (such as institutionalization of environmental committees within communities as best practices). The theory provides training and development of environmental information by individuals and organizations encourages and reinforces internal and external networks on environmental challenges facing Uganda.

## 2.2 Conceptual Model

The conceptual model above shows the relationship between the study variables. OECD countries came up with the Corporate Governance principles namely accountability, transparency, and fairness. These which are embedded in the regulatory framework of a given country by law makers and Government. Companies or firms then apply these principles which lead to good corporate governance.

This good corporate governance should elicit compliance with Government or National regulations leading to economic growth and in the case of this study environmental sustainability. Companies should also be able to build trust between themselves and the various stake holders they serve. Therefore, the model above shows that trust moderates the relationship between good corporate governance and compliance.

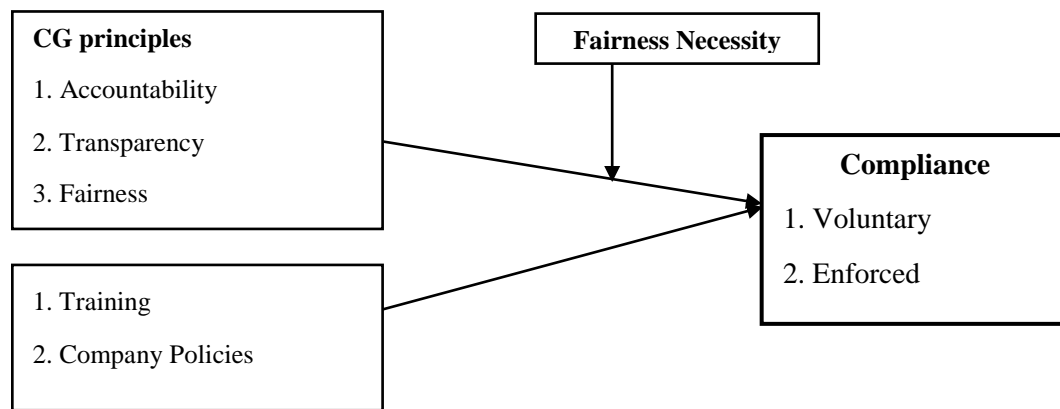


**Fig 2-1: Overview of the functioning of Corporate Governance principles.**

Source: Adopted from Siems and Alvarez-Macotela, 2017

From the above model in Fig 2-1 above, the study model is constructed to address the research questions. From Fig 2-1 above, a study model was developed as indicated in Fig 2-2 below. The model extract three constructs of Corporate Governance principles.

(Accountability, Transparency and Fairness) and Organizational factors (Training and Policy) as drivers that elicit compliance.



**Fig 2-2: Study Model.**

**2.2.1 Governance Accountability and Environmental enforcement**

Globally, there has been a rise in contracting perspectives companies and civil society groups have on corporate responsibility to environment. Several business lobbyists’ have promoted and emphasized environmental disclosure, voluntary contribution to words solutions pressing social and environmental problems through partnerships with other stake holders. The notion of corporate accountability has become the rallying point for sustainable environmental conservation, demanding stricter regulation of corporate behavior by NEMA. According to a study by Eter Lund-Thomsen, 2005, they reveal that whereas companies have instituted Corporate Social Responsibility (CSR) to address environmental concerns, CSR has been found to improve environmental management system and reduce corporate pollution levels. On the other hand, corporate accountability approaches provide incentives to companies to improve their environmental performance, assists in the development of national framework that guide



companies- community interactions and facilitate the enforcement of national legislation pertaining to corporate responsibility. However, Eter Lund-Thomsen, 2005, reveal that both approaches have failed to address the underlying global level structural course of conflict between companies and stake holders affected by their operations.

The seeming lack of responsibility, environmental protection policy does not represent national strategic policy. Local government administrations have a primary responsibility to enforce environmental regulations. None the less local governments tend to be lenient towards polluting businesses when enforcing environmental regulations (Sinkule and Ortolano (1995), Ma and Ortolano (2000) and Rooij (2006). According to Ma and Ortolano (2000), actions by the local environmental protection bureaus (EPBs) like NEMA to be pragmatic and adds that such actions are influenced by revenue, local government pressure, social connections, and positions. Other studies by Rooij, 2006 reveal weak regular enforcement as being characterized by risk aversion, weak punishments, and corporation with violators of environmental policies. Rooij B. 2006, further attributes EPB behavior to local protectionism of the government. Zhou and Lian (2011) have also focused on the implementation issue at the EPB level, but they interpret the local enforcement behaviours to be a result of negotiations between different levels of government. Therefore, much as EPB behavior is critical in explaining local enforcement challenges, often local EPB actions reflect the will of the local governments, as the resources for EPB and the promotion of its leaders are decided solely by the corresponding local government. The leaders of local governments are the ones who direct the behavior of EPBs. In other words, the actions of EPBs in the local districts are a reflection only of the supervising agency. Therefore, the behavior of local governments in understanding enforcement challenges must be analyzed. Other studies that have been done on local environmental protection came up with mixed impacts of institutional factors. They stress that the conflict between economic development and environmental protection for local governments continues to increase as the rate of urbanization and industrialization increases. (Jahiel,1997, and Tang et al. 1997). According to Economy and Lieberthal (2007) in a study done in China, they argue that the environmental protection problem is caused by political hurdles, with key factors being power allocation and incentive structures.

Therefore, this study will provide an analysis of the local government's environmental enforcement and how it influences local enforcement. In the analysis, the assumption that local

governments being rational actors will be made. Local governments' shirking of environmental enforcement is a response to the institutional environment.

### **2.2.2 Environmental Transparency, Disclosure, and Enforcement Landscape**

At the beginning of this decade 2012, a host of new players joined the environmental governance space while others have decided to retreat. According to Van Rooijet al.2016, these new players are judges, prosecutors, environmental NGOs, etc. Most recently, local tax bureaus and police have begun to play a more significant role in environmental enforcement activities. Most countries have made strides and began in introducing environmental tax aims at reducing pollution and other environmental hazards for instance in P.R.China, environmental tax is enforced by the EPBs and is seen a new revenue stream (Xinhua net, 2018). While there has been good news around promoting environmental regulation and enforcement, other areas such as information transparency and disclosures have been tightened. According to Wang 2018 and Seligsohnet ET al.2018, they examine the impact of EPBs' increased information transparency on key environmental outcomes. Using several performance measurements of air and water quality along with the widely used Pollution Information Transparency Index (PITI), they find that public transparency alone has had no impact on environmental outcomes beyond the provision of information itself. The significant implication of this research is that information disclosure only results in improved environmental outcomes when coupled with the design of mechanisms for its use, both in the effective interpretation of the data and in a role for the citizenry to influence government (Seligsohnet et al.2018: 31). A study examining environmental politic by Mol and Carter 2006 analyses the complexities and dilemmas weighing both local and global implications. The study suggests that new regulations between state, market, and civil society, and opening up to words from the outside world characterize the new modes of environmental governance that turns the development path in a more sustainable direction. According to a study by Mazzucato 2015 on greenhouse gas (GHG) emissions, they stress that a new transparency and disclosure to multilateral approaches have a great effect on reducing Green House Gas (GHG) emissions and thus has generated widespread admiration for green entrepreneurship in several states. Several studies continue to emphasize the importance of transparency and disclosure with the aim of achieving sustainable community base environmental enforcement.

While the creation of Environmental police is intended to increase compliance, disclosure and transparency on environmental issues, there remains thorny issues to resolve regarding the legal status of this force (Wunderlich 2017). New actors or entrants with varying and long-standing roles in environmental governance have created shifting position in disclosure standards. According to Eaton and Kostka (2018), they highlight the inter jurisdictional environment management mechanisms creating power centers which make some actors more powerful while others remain weakened (Mol and Carter 2006: 160; Halverson 2004; Huang 2017).

### **2.2.3 Concept and developing stages of public participation to enhance transparency and disclosure.**

Public participation in governance covers either direct or indirect involvement of stake holders in decision making (Quick, K.S.; Bryson, J.M, 2017). Public participation and disclosure go through two stages including the stage of passive participation and the stage of active participation. To some extent, the public's passive participation means voting with their feet (Tiebout, C.M., 1956) held the view that the public could express their dissatisfaction with local public services by migrating to choose a better living environment. Banzhaf and Walsh, 2006, provided strong empirical support for the notion that households voted with their feet in response to changes in environmental quality. Passive participation is a kind of threaten-to-leave mechanism, which has played a central role in the theory of local public affairs for centuries.

With the rise in democracy, there was a proposal to have another form of participation that would enhance disclosure and transparency in environmental matters. According to Hirschman, 1970, public active participation in environmental issues is a function of environmental justice. However, in comparison with the threaten to leave mechanism, the above mechanism contributes to similar governance effects. More importantly, through active participation, the public can transfer the negative externalities of environmental pollution to polluting enterprises instead of bearing the cost themselves (Taylor, D.E, 2000).

Several theoretical studies have been done to elaborate the advantages of involving public participation in environmental governance (Garmendia et al, 2010; Jolibert, C.; Wesselink, 2012). Environmental events, social cohesion, rationality, and quality decision-making around environmental concerns were highlighted as key drivers for information disclosure (Innes, J.E.; Booher, D.E, 2004; Muro, M.; Jeffrey, P, 2012; Hogl, K. Et al, 2012; Newig, J., 2009). Other studies by Kanu et al, 2018, argue that participation in environmental impact assessment (EIA)

processes generates more social benefits, fewer environmental costs, and greater economic and financial benefits. Furthermore, Chen and Han, 2018, claimed that public participation and disclosure could enhance public awareness, mobilize multiple forces to reconcile the conflicts among multiple interest groups, supervise corporate environmental behavior, and overcome the shortcomings of government unilateral decision-making.

Many case studies have supported the success of public participation in environmental governance and disclosure. Studies have been done verifying the correlation between environmental governance and public participation, indicating that this would bring about a sustainable urbanization process. (Cent et al., 2014; Enserink and Koppenjan, 2007).

#### **2.2.4 Fairness considerations in environmental policy**

Over the past few decades, policy formulation in environmental issues has faced challenges with fairness. The concept of fairness has taken central stage in discussion and deliberation concerning environment and resource management. Fairness used to imply deliberative democracy and equity yet sometimes it obscures underlying strategies to tilt the field to the advantage of powerful actors. According to Blaser, 2010, certain actors in tropical countries have built networks that may lack access to legal markets due to excessive and prohibitive regulations that in turn contribute to forcing them into illegal activities. According to Ladner, 2009; Larson and Ribot, 2007, both agree that simply enforcing rules will not necessarily yield fair outcomes but rather the playing field needs to be actively leveled in terms of power-sharing in decision-making, well-crafted fair laws, and policy implementation. Vogel, 2010; Levin et al, 2012; Gibbon and Ponte, 2008, have all argued that large firms have often forced other small firms to comply with environmental and social protection policies leaving larger firms to benefit from championing increasing standards (Levin et al. 2012).

The concept of fairness as central to a level playing field draws on theories of environmental justice. Environmental justice denotes the fair treatment and meaningful involvement of people in environmental matters. The involvement is geared towards development, implementation, and enforcement of laws, regulation, and policies (Bullard, 1999). According to several studies by Sikor, 2013; Walker, 2012 and Sikor, 2014 environmental justice call attention to political justice. The two concepts are varying and occasionally contradictory notions. Justice is asserted by actors with varying degrees of power that affects others' actions and potential. Action plans

that are attempted to ensure that the right things are done and are not in competition with those would be described as unscrupulous and ill concerned with issues of legality.

Therefore, to be able to interrogate fairness, there is need to draw literature from environmental justice. This includes justice as equitable distribution of benefit, opportunity, and risk (Wen et al, 2013). Distributive justice tends to focus on economic outcome, i.e. who gets what, and how people perceive the distribution patterns. According to Sikor et al, 2014, equitable assignment of rights and responsibilities among actors as part of distributional justice. Other scholars have also come to agree and emphasize the importance of representation and recognition which equally are influential in distribution (Sikor 2013; Fraser 2009). The logic of having sustainable distributive environmental justice by making citizens aware of environmental benefits and hazards and genuinely involve them in decision making. Okereke and Dooley 2010; Schroeder 2010, further indicate that representation more relates to actors who influence decision in policy implementation. Fraser, 2009 theorizes, and acknowledges people's distinct identities and ensures that social and cultural differences in environment are recognized and respected.

Recognition justice is about avoiding discrimination against particular groups of people due to their distinct social and cultural norms. Therefore, considering justice as a recognition highlights the underlying course of misdistribution and representational injustice (Schlosberg 2007). Several studies have identified measures to address representation and recognition and they highlight the core tenet of stakeholder inclusiveness in environmental design implementation (Wiersum and Elands 2013; Lesniewska and McDermott 2014). Much as inclusiveness is critical in environmental design implementation, several studies have also recognized that conflict between state environmental laws and traditional land ownership rights may arise leading to non-compliance with environmental laws. These studies further recognize that often informal sectors are overlooked in national policy formulation (EC 2003a, 18; Lesniewska and McDermott 2014; Assembe-Mvondo 2013; Myers et al. 2017; Hajjar (2015).

### **2.3.5 Moderating Effect of Trust on Corporate governance and compliance**

The Organization for Economic Co-operation and Development (OECD) has for long promoted the G20/OECD Principles of Corporate Governance 2015 as a means 'to support investment as a powerful driver of growth and sustainability. Much as the OECD has been confident in the impact of its principles, the majority of 80% of the world's trade and investment is accounted for

by 34 members and 5 partner OECD countries leaving the rest. Beyond the OECD members and partners, the principles have largely been applied to developed countries and businesses leaving developing countries. Therefore, questions remain, how realistic is the OECD's ambition to promote corporate governance principles, and how satisfactory do the principles operate across the world? Since the first version was adopted in 1999, researchers have examined whether and how these principles have been applied In African countries including Uganda. (DA Guobadia, 2001; AM Abu-Tapanjeh, 2009).

Following the parallel development and cooperation between G20 and OECD, several countries have been skeptical to endorse and accept the implementation of some of these principles. The leaders of the G20 endorsed the revised OECD principles in November 2015 which therefore became the G20/OECD principles of Corporate Governance 2015. However, the question is what forces shape the principles and therefore interests that OECD has advanced or promoted. The restricted membership to the OECD sometimes is seen as a rich man's club. According to R Mahon and S McBride, 2008, there have been variations in approach that have been observed since the OECD was founded in 1961. First, it followed a central left Keynesian line, then in the 1980s, it became more neoliberal with studies on structural adjustments being advanced, then Today, a mixed policy is said to be dominant, not least due to the strong position of European countries.

However, the substance of the OECD principles does not support the above changes in position. They explain that there is no single model for good corporate governance, but they aim to build on the common elements already advanced such as the rights of shareholders and the responsibilities of the board. According to B Kogut, 2013, it's difficult or even impossible to have corporate governance laws that are suitable for all countries. OECD is fairly aware of this challenge and it's trying to respond to this challenge through contextual initiatives such as the regional roundtables and reports however, it remains that the Principles are a uniform template which, as the following will explain, does not reflect a model of corporate governance that can simply be applied universally.

Therefore, on this basis, it can be suggested that the governance principles are a good example of networked governance and its possible benefits. These principles involve many private and public parties. However, against the advantages of network governance, some of the potential

drawbacks may be relevant to the principles. It does not work well for organizations where hierarchical cultures and, thus, vertical institutions, such as powerful states, are markedly dominant. Several studies have also revealed that it's less effective in settings where stakeholders have dissimilar cultural values and lack common goals. Additionally, the OECD governance model is built on trust and loyalty rather than administrative command. Therefore, trust matters primarily as a spontaneous phenomenon.

Building on the work of Elinor Ostrom, 1990 and other scholars, this research posits that corporation requires trust and the support of trust- building institutions to achieve environmental compliance through good governance. The interaction between individual parties makes them realize the need for institutional interdependencies in environmental enforcement as well as the need for monitoring mechanisms and independent courts. As a result, gradually they adopt an effective network that is built based on a culture of trust.

Building trust between resource users and natural resource institutions is essential when creating conservation policies that rely on stakeholders to be effective. Trust can enable the public and agencies to engage in cooperative behavior towards a shared goal. Much as trust has gained a lot of attention among scholars in recent years, the influence individual cognitive and behavioral factors play in influencing the level of trust is critical. According to Zhen, N., Barnett, J. & Webber, M., 2018, reveals that trust in natural resource managers and planners is recognized as a crucial component of the public's perception of environmental risks. Further studies on water trust revealed that a moderate level of overall trust in water suppliers was observed. However less trust in the honesty and fairness of these organizations. Additionally, education helps explain the differences in people's trust in Shanghai's water authorities, and that these are more influential than factors such as gender and age. (Zhen, N., Barnett et al 2018). Therefore, trust has a strong mediating effect on environmental compliance.

### **2.3 Summary**

Therefore, Corporate governance principles and environmental compliance is measured in two contexts as per the study. First is the institutional context. Here policy issues are discussed and the institutional framework that enforces policies. Second is the Governance principles. Here Training and communications of policies matter to ensure compliance among stakeholders in preserving the environment.

## **CHAPTER III: METHODOLOGY**

### **3.1 Overview of the Research Problem**

Three issues make the research problem. The first notable position is that the effectiveness of the Corporate Governance (CG) structures in adopting decisions that foster environmental sustainability depends a great deal on the national institutional context (Ortiz-de-Mandojana et al., 2016). For example, although legal traditions vary across countries, it is generally agreed that the structure, vigilance, and capacity of the regulatory and judicial framework form an integral part of the Corporate Governance (CG) environment (Jesover and Kirkpatrick. 2005). The second issue is that CG rotates around some principles. Originally adopted by 30 Organization for Economic Co-operation and Development (OECD) countries in 1999, these principles have gained worldwide acceptance as a benchmark for sound Corporate Governance (CG). These principles are accountability, transparency, fairness, responsibility, and risk management and provide specific guidance for policymakers, regulators, and other stakeholders in improving the legal and institutional environment that underpins Corporate Governance (CG). To this list, The Organization for Economic Co-operation and Development (OECD), (2015) adds leadership, integrity, capability, and sustainability, however, the main substance and structure remained unchanged. The board governs the activities of the firm by relying on these



principles (Ashiru et al., 2019). Some scholars however question the extent to which these principles are applied satisfactorily across the world (Siems & Alvarez-Macotela, 2015).

The third notable position is that how NEMA implements the Corporate Governance (CG) principles will elicit compliance or non-compliance with environmental guidelines and regulations among various stakeholders such as industry.

### **3.2 Operationalization of Theoretical Constructs**

Operationalization of the theoretical constructs is demonstrated in Fig 2-2 above. The study looked at Institutional context as the main driver for compliance. Here policies issues that influence environmental compliance are measured in the research tool (CEH 1-6). Governance principles have also been seen to have an influence on compliance. Here the study operationalized governance principles by measuring training and communication of environmental policies (CT23-25)

### **3.3 Research Purpose and Questions**

There are three notable positions regarding this problem noted by this research.

The first notable position is that the effectiveness of the Corporate Governance (CG) structures in adopting decisions that foster environmental sustainability depends a great deal on the national institutional context (Ortiz-de-Mandojana et al., 2016).

The second notable position is that Corporate Governance (CG) is based on sound principles, which reflect a global consensus regarding the critical importance of Corporate Governance (CG) in contributing to the economic vitality of world economies.

The third notable position is that how NEMA implements the Corporate Governance (CG) principles will elicit compliance or non-compliance with environmental guidelines and regulations among various stakeholders such as industry. Literature holds that perceptions of fairness are positively correlated with compliance (Erich et al., 2006).

Considering these three positions and focusing on industry in particular, this study sets out to examine the extent to which corporate governance structures set up by the NEMA board influence the performance of the Authority in terms of eliciting compliance with environmental guidelines and regulations.

### **3.3.1 Research questions**

1. To what extent does the organization (NEMA/Ministry of Water and Environment) practice Corporate Governance (Accountability, Transparency and Fairness) in the execution of their mandate in eliciting compliance from service and industrial organizations in the study area?
2. To what extent are companies influenced by Corporate Governance variables (Accountability, Transparency and Fairness) as practiced by NEMA/Ministry of Water and Environment in their compliance or non-compliance with environmental regulations?
3. To what degree do policy related issues and training predict compliance with environmental regulations by industries.

### **3.4 Research Design**

To address the research questions, the study employed a mixed research design (Morgan 2007), hence two studies will be conducted. Research questions one and two will be addressed in the first study based on a qualitative approach, while research question three will be addressed in the second study which will be based on a quantitative approach.

#### **3.4.1 Study one**

Study 1 was composed of two different research questions/objectives.

Research question 1, members of the Board and top management were purposively selected to participate in structured interviews (using interview protocols) seeking to examine the extent to which CG principles are applied in these organizations. However, before these interviews were conducted, questionnaires to measure the extent to which these principles are practiced were given to the respondents in the Ministry of Water and Environment and NEMA. This sampling design is appropriate because these are the people who are familiar with the CG and the operationalization of Corporate Governance (CG) principles in their organizations. Data will be transcribed to see which themes merge.

In Research Question 2, top management in both service and industrial sectors were both chosen and interviewed to see the extent to which CG principles as applied by NEMA influences their compliance with environmental regulations.

### **3.4.2 Study Two**

### **3.4.3 Research Question 3**

This is the Quantitative phase of the study in which the study sought to measure the extent to which policy and training issues elicit compliance with environmental regulation in both service and industrial organizations. The study also sought to establish the extent to which the above relationships are influenced by the location of the organization, duration in business (in terms of years), as well as size (Number of Employees).

### **3.5 Population and Sample**

A sampling frame of industries in Kampala will be obtained from the Uganda Manufacturers Association (UMA). From this frame, a probability sample of industries (N=20) will obtain by means of simple random sampling. In each chosen industry, five managers will be randomly selected to participate in the study. It is expected that a sizeable sample (N=100) will be realized from the industries to respond to the compliance issues within their industries.

Within NEMA, a sampling frame of the people at the management level will be obtained, and a systematic sample of these managers (N=50) will be obtained from this frame for inclusion in the study to respond to Corporate Governance (CG) issues within this Authority.

### **3.6 Data collection and measures**

#### **3.6.1 Focused Group Interviews**

The study employed focused group discussions as a data collection method to obtain opinions from policymakers. This helped the study identify policy variables that elicit compliance within the organizations or industries. In the first phase of the study, the opinions collected were analyzed to derive key themes that would inform the second phase of the study (Quantitative).

#### **3.6.2 Questionnaire Surveys**

This study used a questionnaire approach as the technique for primary data collection. Two sets of questionnaires were administered. One set targeted the industries as the unit of analysis and the second questionnaire targeted the environmental policymakers through one of their agencies (NEMA). A letter of no objection was obtained from NEMA to conduct the study. The respondents had been contacted and allowed to reply and complete the questionnaires at their handy time. This data collection method was mainly geared at the second phase of the study (Quantitative) which answered the third objective of the study.

### **3.7 Operationalization of variables**

#### **3.7.1 Regulatory framework**

This refers to the legal and regulatory framework on the environment in Uganda which includes the 1995 Constitution of the Republic of Uganda, the National Environment Act (NEA) 1995 (now NEA 2019), sector-specific Acts with provisions for EIA, the EIA Regulations, 1998 (now ESIA Regulations 2020) and the ratified UN Conventions with provision for EIA.

#### **3.7.2 Corporate Governance**

This refers to a system of rules, practices, and processes by which a company is directed and controlled. Corporate governance essentially involves balancing the interests of a company's many stakeholders, which can include shareholders, senior management, customers, suppliers, lenders, the government, and the community. The practices that are adopted, enable the regulatory frameworks to exist and work.

#### **3.7.3 Training and communication**

This refers to passing on key essential elements in the implementation of environmental management systems (EMS).

#### **3.7.4 Compliance**

This refers to Environmental compliance refers to the act of conforming to legal or official environmental requirements and policies.

### **3.8 Participant Selection**

For study 1, respondents were selected purposively (N=20). Participate in structured interviews (using interview protocols) sought to address the two research questions. People who are familiar with the institutional context and are also responsible for the operationalization of Corporate Governance (CG) principles had to be selected to participate. Data was transcribed to see which themes merged.

For study 2, respondents were selected using random sampling (N= 100). Participants in Study 2 helped provide data on the extent to which CG (Accountability, Transparency, and Fairness) principles influence environmental compliance by industries.

### **3.9 Instrumentation**

Questionnaire items were obtained from the environmental self-assessment questionnaire (Choi et al., 2017). Training and Communication was measured with three items, while compliance was measured with 13 items.

Corporate Governance was operationalized in terms of three variables (Accountability, Transparency and Fairness). Accountability was measured by 19 variables, Transparency with 9 variables and Fairness measured with 5 variables.

### **3.10 Data Collection Procedures**

#### **3.10.1 Objective 1 of the Study (Quantitative)**

Since the study uses a mixed research design, study 1 (Survey Research Design) involved measuring the extent to which NEMA/MWE practice corporate governance. Data was collected by requesting respondents (N=184) to indicate their level of agreement with items measuring Accountability, Transparency and Fairness based on Likert scale 1-Strongly Disagree to 5-Strongly Agree.

#### **3.10.2 Objective 1 of the study (Qualitative)**

Following the above exercise, interviews were held with officials (N=30) from these organizations to establish whether their practice of Accountability, Transparency, and Fairness in any way elicits compliance with environmental regulation by service and industrial organizations.

#### **3.10.3 Objective 2 of the study (Qualitative)**

As a follow-up to the above objective, interviews were also held with officials (N=30) from both industrial and service organizations to establish whether the practice of Accountability, Transparency, and Fairness by the MWE and NEMA in any way influences their willingness to comply with environmental regulations.

#### **3.10.4 Objective 3 of the study (Quantitative)**

In the last and final phase of the study, questionnaires were passed on to officials from service and industrial organizations (N=137) used to measure the extent to which policy and training predict compliance with environmental regulations in both industry and service organizations.

### **3.11 Data Analysis**

#### **3.11.1 Data analysis for Objective 1 (Quantitative)**

At this stage, this was done by calculating the means and standard deviation of each of the items measuring Corporate Governance Variables (Accountability, Transparency, and Fairness)

#### **3.11.2 Data analysis for Objective 1 (Qualitative)**

The second part of this objective was analyzed qualitatively using N-Vivo. Major themes were extracted.

### **3.11.3 Data analysis for Objective 2 (Qualitative)**

The data from the second objective was analyzed qualitatively using N-Vivo.

### **3.11.4 Data analysis for objective 3 (Quantitative)**

Data from the third objective was analyzed quantitatively using IBM SPSS v27, statistical software used to solve business and research problems using ad-hoc analysis, hypothesis testing, and predictive analytics.

#### **3.11.4.1 Descriptive Statistics**

Descriptive statistics of the participating institutions (Location, Duration in business, industrial type, and number of employees or size) was analyzed.

#### **3.11.4.2 Reliability**

After presenting the descriptive statistics, the reliability of the study variables was established. Any variable with a Cronbach alpha value above 0.7 was considered reliable.

#### **3.11.4.3 Factor Analysis**

Factor analysis was carried out by means of VARIMAX rotation to establish the factor structure of the study variables. Regression scores were saved.

#### **3.11.4.4 Correlation**

A correlation matrix was constructed to establish the relationship between Corporate Governance principles and compliance.

#### **3.11.4.5 Linear Regression**

A linear regression was carried out between the independent variables (Policy and Training) and the dependent variable (Compliance)

### **3.12 Research Design Limitations**

1) Sample size in the quantitative phase will be limited by the fact that some industries may not have any environmental compliance officers.

### **3.13 Conclusion**

It is anticipated that the abovementioned methods will effectively address the set research questions in this study.

## **CHAPTER IV:**

### **RESULTS**

#### **4.1 Introduction**

The general objective of the study was to investigate the influence of Corporate Governance practices and Environmental compliance behavior. The specific objectives of the study were i) The study seeks to establish the extent to which the NEMA Board and Management have applied Corporate Governance (CG) principles. ii) The study seeks to establish the extent to which the institutional context curtails or enhances the operations of NEMA. iii) The study seeks to establish whether how Corporate Governance (CG) principles are applied elicits compliance in the industries.

This chapter presents the descriptive findings, demographic characteristics, and all the study variables from the questionnaires. The study was structured in two stages, the first stage was Qualitative where interviews were applied, and thematic analysis was done to inform the second stage of the study. The second stage was Quantitative where Questionnaires were administered, and inferential statistics were revealed following the testing of the hypotheses using correlation and multiple regression analysis.

#### **4.2 Presentation of findings for (Study 1)**

##### **4.2.1 Pre-study**

Composite variables were formed from accountability, transparency and fairness items to yield three dimensions of corporate governance. Reliability of each of these dimensions were calculated before measuring the extent to which CG is practiced in the ministry and NEMA.

**Table 4-1: Reliability of Corporate Governance**

| S/N | Variable       | Items | Cronbach Alpha |                |
|-----|----------------|-------|----------------|----------------|
| 1   | Accountability | 19    | 0.890          | C:G Principles |
| 2   | Transparency   | 9     | 0.853          |                |
| 3   | Fairness       | 5     | 0.6            |                |

*Source: Primary Data, 2023*

The results indicate that the dimensions had acceptable reliabilities. Accountability and transparency had alpha > 0.7 (Nunnally and Bernstein, 1994). Fairness has alpha =0.6. This is acceptable for new scales.

After the above exercise, the extent to which CG principles are practiced was measured using a Questionnaire on a scale of 1 strongly disagree to 5 strongly agree. The results are presented in Tables 4-2 below.

**Table: 4-2: Descriptive Statistics on Corporate Governance Principles.**

| Descriptive Statistics   |     |          |          |        |                |
|--|-----|----------|----------|--------|----------------|
|  | N   | Mini mum | Maxi mum | Mean   | Std. Deviation |
| <b>Accountability</b>  |     |          |          |        |                |
| Ensures transparency in the organization's decision making   | 184 | 1.00     | 5.00     | 3.7391 | 1.16759        |
| Responding to internal opinions and feedback in the organization's operations                                | 184 | 1.00     | 5.00     | 3.6141 | 1.04438        |
| Observing organization-related laws, operational principles and by laws                                      | 184 | 1.00     | 5.00     | 3.9022 | .86283         |
| Enhancing efficiency in the organization's operation   | 184 | 1.00     | 5.00     | 3.9728 | .87110         |
| Budget reporting in a timely manner  | 184 | 1.00     | 5.00     | 3.9783 | .89294         |
| Abiding by administrative guidance of government including general reporting duty to the government agencies | 184 | 1.00     | 5.00     | 3.9457 | .91573         |
| Sharing the organizational vision with staff members   | 184 | 1.00     | 5.00     | 4.0109 | .88082         |
| Increasing and facilitating active participation of staff and general citizens in environmental activities   | 184 | 1.00     | 5.00     | 3.9076 | .93338         |
| Encouraging the public as active participant in environment compliance                                       | 184 | 1.00     | 5.00     | 3.9239 | .83938         |
| Giving and maintaining motivation of volunteers in environmental activities                                  | 184 | 1.00     | 5.00     | 3.6087 | 1.02383        |



|  |     |      |      |        |         |
|--|-----|------|------|--------|---------|
| Educating citizens /local residents about organizations main focuses   | 183 | 1.00 | 5.00 | 3.6995 | .95062  |
| Making recommendations and generating alternative strategies for improving solving social and environmental problems   | 183 | 1.00 | 5.00 | 3.6776 | .90778  |
| Executing roles as a participant in public policy making process in government-led committees  | 182 | 1.00 | 5.00 | 3.7637 | .93679  |
| Executing professional roles in policy-related work or social service provisions assigned by government agencies   | 182 | 1.00 | 5.00 | 3.7802 | .97824  |
| Offering only services advancing the mission of organizations and allocating resources that are relevant to organizations mission  | 183 | 1.00 | 5.00 | 3.7104 | .89458  |
| Providing accurate information   | 183 | 1.00 | 5.00 | 3.8798 | .90589  |
| Increasing the organizations outcomes through its environmental activities and projects  | 183 | 1.00 | 5.00 | 3.9344 | .89324  |
| Formation and maintenance of collaborative partnership with government agencies  | 181 | 1.00 | 5.00 | 4.1436 | .94359  |
| <b>Transparency</b>  |     |      |      |        |         |
| Formation and maintenance of collaborative partnership with companies  | 181 | 1.00 | 5.00 | 3.9171 | .99932  |
| NEMA is fully committed to environmental need  | 181 | 1.00 | 5.00 | 4.2762 | .91344  |
| NEMA promotes environmental commitments through open communications with the public  | 180 | 1.00 | 5.00 | 4.1111 | .92083  |
| NEMA competitive strategy is based on our understanding of environmental needs   | 181 | 1.00 | 5.00 | 4.0663 | .83401  |
| NEMA systematically attempt to solve environmental problems  | 181 | 1.00 | 5.00 | 4.0110 | .85628  |
| NEMA strives for continuous improvements in environmental friendliness   | 178 | 1.00 | 5.00 | 4.1124 | .91365  |
| NEMA encourages the business community to incorporate environmental solutions in their products  | 180 | 1.00 | 5.00 | 3.8167 | 1.03824 |
| NEMA seeks opportunities to encourage the public to have community-based environmental committees  | 181 | 1.00 | 5.00 | 3.7459 | 1.04963 |
| NEMA regularly sensitizes the public to government environmental regulations   | 180 | 1.00 | 5.00 | 3.8944 | .91845  |
| NEMA attempts to meet and communicate international environmental standards  | 181 | 1.00 | 5.00 | 3.8287 | .99914  |
| <b>Fairness</b>  |     |      |      |        |         |
| Everyone should have the freedom to interact with the environment with minimal MWE /Government interference  | 183 | 1.00 | 5.00 | 3.3169 | 1.32104 |
| Everyone should have the opportunity to benefit from environmental resources, but unequal outcomes happen because some people take more advantage of opportunities than others | 183 | 1.00 | 5.00 | 3.9563 | .98798  |
| Everyone should have equal opportunities to benefit from environmental resources, but equal outcomes should not be guaranteed  | 182 | 1.00 | 5.00 | 3.3077 | 1.12914 |
| Inequalities should be eliminated so that everyone has roughly the same environmental resources  | 183 | 1.00 | 5.00 | 3.8306 | 1.07353 |
| Eliminating inequality would be impossible- but it should be reduced   | 183 | 1.00 | 5.00 | 3.9071 | 1.05200 |

|                    |     |  |  |  |
|--------------------|-----|--|--|--|
| Valid N (listwise) | 173 |  |  |  |
|--------------------|-----|--|--|--|

Source: Primary data, 2023

The study revealed that of the three principles of corporate governance, respondents indicated that only two were being practiced well. Transparency (Mean=3.97798; STD=0.9443) and Accountability (Mean= 3.8440; STD=0.9357) were being practiced well within NEMA respectively. The agency (NEMA) has even provided evidence showing their effort in these two dimensions. The environmental agencies have information that is shared regularly with the public as well as maintaining an open access to information between industry and enforcement agencies. However much as most respondents agreed that NEMA was fair (Mean=3.6637; STD=1.1127), the level of variability and disagreement with this construct was high as demonstrated by the high standard deviation. This was also seen by number of complaints that are made by some industries where some were feeling disgruntled for having preferential treatment for Large companies compared to small companies.

**4.2.2 Results of Interviews**

**4.2.2.1 Governance Role in enhancing compliance.**

The study conducted several interviews with policy makers with an aim of assessing the extent to which governance can enhance compliance (Obj 2). NEMA-R1 indicated “there is a need to have a comprehensive approach that involves collaboration, enforcement, and incentives is necessary”. The respondent indicated having a strong institutional collaborative mechanism to enforce environmental compliance. Some of the challenges that have been noted when it comes to compliance emanate from institutional failures. According to NEMA-R2 and NEMA-R3, strengthening environmental regulations and implementation of monitoring and reporting systems was critical in enforcing compliance. NEMA-R2 and NEMA-R3, “Work with governments and relevant regulatory bodies to establish and strengthen environmental laws and regulations. These should cover areas such as emissions standards, waste management, and sustainable resource use. Ensure that the regulations align with international best practices and are enforced consistently”.

While NEMA-KR2 advocates for strengthening environmental laws and regulation with government as partner, the study revealed that environmental regulations are largely in place,

however, their enforcement remains a challenge. Some industries have been cited constructing in wetlands, polluting water ways etc, when confronted by enforcement agencies, the same firms that pollute the environment were noted to have political influences or patronages that protected them from such regulations. As such practices continue to take place despite regulation being in place. However NEMA-KR3, emphasized that “Implement Monitoring and Reporting Systems: Develop robust monitoring and reporting systems that require industries to track and disclose their environmental performance regularly. This will enable better oversight and identification of areas requiring improvement”. The same position was widely held by NEMA-KR1 and NEMA-KR2 and NEMA-KR3. However, while monitoring and reporting framework would help enhance compliance, there are bottlenecks in implementation. Some of the challenges they face would include financing challenges for the implementation of such a framework. All the respondents indicated and agreed that the implementation of monitoring and reporting framework would provide better oversight and identification of areas requiring improvements.

The study also revealed through NEMA-KR4, that environmental Audits are the mandate of NEMA and indicated that, “Industries are Encourage to conduct regular environmental audits to assess their compliance with regulations and identify areas for improvement”. However, from the Quantitative analysis in the study, most of the industries were found not to have environmental compliance officers in place or let alone an environment compliance program. This therefore indicates the urgency to strengthen the internal structures of these industries to be able to deal with environmental regulations as and when they change. An Industry focus group discussion (IND-FG1) indicated that “NEMA Provide Technical Assistance and Capacity Building: Offer technical assistance and capacity-building programs to help industries adopt sustainable practices and comply with environmental regulations. This could include training on clean technologies, resource efficiency, and waste reduction”.

Among sampled industries, there is need to capacity building in environmental compliance. Most of the industries seem not mind about environmental issues only to react when the regulator like NEMA shows concern. The most affected industries tend to be the smaller ones that pay the cost of non-compliance. Large Corporation tend not to be affected by non-compliance.

#### **4.2.2.2 Governance Incentives for Environmental Compliance**

The study further probed to explore the reasons for non-compliance. The respondents raised the issue of benefit for compliance. Several firms stated that much as they comply with environmental regulations, there are other firms that are not complying yet the benefit for compliance or non-compliance is not well stated in Uganda. IND-FG2 stated that “NEMA Promotes Carbon Pricing and Trading: Facilitate the adoption of carbon pricing mechanisms, such as emissions trading systems or carbon taxes, to incentivize industries to reduce their carbon footprint. Encourage participation in carbon markets to support emission reduction initiatives”. The incentives would motivate to industry to self-assess themselves on environmental compliance. If there are not direct incentives to the industries, policies and regulations will always fall short of reaching compliance targets. This could perhaps highlight the reason why industries don’t have environmental mechanisms integrated in their governance structures. Therefore, with direct incentives, the Governance structures would see to it that environment is fully integrated. Furthermore IND-FG2 indicated the need to enhance green financing strategies. The group indicated that “Establish Green Financing Mechanisms” to facilitate access to green financing and sustainable investment opportunities for industries looking to transition towards environmentally friendly practices. This can be achieved through partnerships with financial institutions and development agencies”. The mechanisms would further integrate environmental compliance strategies into corporate governance structures thereby seamlessly easing and enhancing compliance at an industrial level.

#### **4.2.2.3 Bridging the gap between Governance and Environmental compliance.**

The study engaged both industry and policy makers to explore ways the environmental compliance gaps can be bridged. Several ideas were raised in the interviews that were conducted. According to IND-FG3, two key issues were raised to bridge the compliance gap. These include Public Private Partnerships encouraged in the area of environmental compliance with the spirit of encouraging the local populace to get involved in environmental conservation rather than waiting for regulators to enforce. “Engage in Public-Private Partnerships: Foster collaboration between governments, and private sector stakeholders to jointly address environmental challenges. Public-private partnerships can leverage expertise, resources, and innovation to drive sustainable solutions”. Secondly, recognition and promotion of sustainable industry practices were emphasized. Environmental protection agencies need to get more involved in promoting

sustainable industry practices by providing certification for industries that comply with environmental regulations. “Recognize and Promote Sustainable Industries: Establish recognition programs or certifications for industries that demonstrate exceptional environmental compliance and sustainable practices. This can create positive competition among industries to improve their environmental performance”. Given this position, NEMA-KR1 and NEMA-KR2 acknowledged and stated that NEMA at the time is working to position the Government to adopt best practices to recognize best environment compliance industries. According to NEMA-KR4 and NEMA-KR5 both indicated that as a government agency, environmental public awareness is being conducted as part of their mandate as well as enforcement of non-compliance through the Environment protection police. However, they did indicate that much as some success has been registered in conduction public awareness, enforcement penalties for non-compliance have been conducted in a segregated manner. A follow-up on this issue from the IND-FG3 indicated a desire by firms that NEMA strengthen public awareness campaigns “Conduct Public Awareness Campaigns: Conduct public awareness campaigns to educate consumers and stakeholders about the importance of supporting environmentally compliant industries. Increased consumer demand for sustainable products can motivate industries to adopt greener practices”. However, where enforcement is concerned, several firms indicated that Enforcement penalties for non-compliance should be addressed “Enforce Penalties for Noncompliance: Implement strict penalties for industries that consistently fail to comply with environmental regulations. This serves as a deterrent and emphasizes the seriousness of environmental compliance”.

In order the bridge the environmental compliance gap, there is a need for both regulators (NEMA) to work closely with the stakeholders by ensuring that environmental institutions set clear environmental targets and incentives that will elicit compliance. This was stated by IND-FG3“Set Targets and Incentives for Compliance: Set clear environmental targets and offer incentives for industries that achieve or surpass these goals. Incentives could include tax breaks, grants, or preferential treatment in government procurement processes”. Hence both institutional frameworks and social and political groups need to see themselves as part of the environment to have this collective response.

#### **4.1 Presentation of findings for Quantitative Analysis (study 2, Research question 3)**

The progression of the investigation was predicated on the initial qualitative phase (Stage 1). Here the study looked at the quantitative aspects of the study. Several techniques were applied to

study variables. These encompassed the analysis of response rate, biographical data analysis, descriptive statistics, T-test computations, correlation studies, and regression analysis, culminating in the moderation analysis.

#### 4.1.1 Characteristics of the Study Organizations

During the research, two distinct questionnaires were disseminated. One questionnaire targeted industry players that affect the environment. So, the Demographic here included non-human aspects. The second Questionnaire was geared toward environmental policy makers and the demographics were human.

From table 4-1 below, the study revealed that most of the industries were concentrated in four regions with an average percentage of 23% (Nakawa, Kawempe, Wakiso and Mukono)

Table 4-3: Location of the industry

|         |                          | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|--------------------------|-----------|---------|---------------|--------------------|
| Valid   | Nakawa Division          | 32        | 23.2    | 23.4          | 23.4               |
|         | Kawempe Division         | 33        | 23.9    | 24.1          | 47.4               |
|         | Kampala Central Division | 8         | 5.8     | 5.8           | 53.3               |
|         | Wakiso                   | 32        | 23.2    | 23.4          | 76.6               |
|         | Mukono                   | 32        | 23.2    | 23.4          | 100.0              |
|         | Total                    | 137       | 99.3    | 100.0         |                    |
| Missing | System                   | 1         | .7      |               |                    |
| Total   |                          | 138       | 100.0   |               |                    |

These locations have been repeatedly associated with environmental degradation emanating from industry activities. Furthermore, majority of these industries were mostly in manufacturing constituting 59.4% and services constituting 39.9%. Manufacturing is reported to have a huge impact of environment as industry waste was noted to be managed poorly.

Table 4-4: Categorization of Industry

|  | Frequency | Percent | Valid Percent | Cumulative Percent |
|--|-----------|---------|---------------|--------------------|
|--|-----------|---------|---------------|--------------------|

|       |               |     |       |       |       |
|-------|---------------|-----|-------|-------|-------|
| Valid | Manufacturing | 82  | 59.4  | 59.4  | 59.4  |
|       | Services      | 55  | 39.9  | 39.9  | 99.3  |
|       | 3             | 1   | .7    | .7    | 100.0 |
|       | Total         | 138 | 100.0 | 100.0 |       |

*Source: Primary data, 2023*

The study also looked at the duration of business. Most industries in these locations indicated that they have been in business for over five years making up 55.8%. This implies that these industries have been having their business licenses renewed and they have an appreciating of the extent to which their activities impact environment.

**Table 4-5: Duration of the Business in that location**

|         |              | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|--------------|-----------|---------|---------------|--------------------|
| Valid   | 2 Years      | 5         | 3.6     | 3.6           | 3.6                |
|         | 3-5 Years    | 54        | 39.1    | 39.4          | 43.1               |
|         | Over 5 years | 77        | 55.8    | 56.2          | 99.3               |
|         | 4            | 1         | .7      | .7            | 100.0              |
|         | Total        | 137       | 99.3    | 100.0         |                    |
| Missing | System       | 1         | .7      |               |                    |
| Total   |              | 138       | 100.0   |               |                    |

*Source: Primary data, 2023*

As seen in the table 4-5 above, the study seems to indicate that the longer the duration in business, the more environment is impacted. The study further indicated in table 4-6 that most of these companies employed between 1-50 employees, 51-100 employees and over 151 employees respectively (25.4%; 26.1% and 26.8%)

**Table 4-6: Number of employees in that specific company**

|         |          | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|----------|-----------|---------|---------------|--------------------|
| Valid   | 1-50     | 35        | 25.4    | 25.9          | 25.9               |
|         | 51-100   | 36        | 26.1    | 26.7          | 52.6               |
|         | 101-150  | 26        | 18.8    | 19.3          | 71.9               |
|         | Over 151 | 37        | 26.8    | 27.4          | 99.3               |
|         | 5        | 1         | .7      | .7            | 100.0              |
|         | Total    | 135       | 97.8    | 100.0         |                    |
| Missing | System   | 3         | 2.2     |               |                    |
| Total   |          | 138       | 100.0   |               |                    |

*Source: Primary data, 2023*

From table 4-6 above, the larger the company by human size is an indication of the level of output in terms of waste that would be associated with that specific company. Small companies seem to have little impact on environment compared to the large companies by employee size. The study further looked at the break down of these industries by product type as seen in table 4-7 below. The study revealed that oil and construction constituted the highest percentage of 23.3% followed by food processing at 18.8% then manufacturing at 11.6%. All the three industries indicated have a waste product that have an impact on the environment. Therefore, the extent to which they comply with environmental regulations is paramount to environmental sustainability.

**Table 4-7: Product type**

|         |                        | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|------------------------|-----------|---------|---------------|--------------------|
| Valid   | agriculture            | 17        | 12.3    | 12.6          | 12.6               |
|         | medical care           | 7         | 5.1     | 5.2           | 17.8               |
|         | processed foods        | 26        | 18.8    | 19.3          | 37.0               |
|         | manufacturing          | 16        | 11.6    | 11.9          | 48.9               |
|         | textile                | 9         | 6.5     | 6.7           | 55.6               |
|         | recycling              | 12        | 8.7     | 8.9           | 64.4               |
|         | finance and saving     | 1         | .7      | .7            | 65.2               |
|         | oil and construction   | 32        | 23.2    | 23.7          | 88.9               |
|         | transport and travels  | 6         | 4.3     | 4.4           | 93.3               |
|         | office work            | 2         | 1.4     | 1.5           | 94.8               |
|         | education and security | 7         | 5.1     | 5.2           | 100.0              |
|         | Total                  | 135       | 97.8    | 100.0         |                    |
| Missing | System                 | 3         | 2.2     |               |                    |
| Total   |                        | 138       | 100.0   |               |                    |

*Source: Primary data, 2023*



The study also found that finance and savings constituted only 0.7% yet all the major industries that have impacting environment negatively obtain their financing from the above sector. One could almost argue that finance and saving is indirectly creating an enabling environment for environmental noncompliance.

#### 4.1.1 Descriptive statistics for study variables

Within the scope of the research, the industries selected for the sample were asked several questions. These ranged from the extent of regulation imposed on their activities to their experiences in complying with environmental regulation. From table 4-8 below, several organizations indicated that they have been cleared and they hold an environmental operating permit (Mean =3.86; STD = 1.282), they undergo environmental inspection regularly (Mean=3.86; STD=1.260), history of compliance being in place (Mean= 3.70; STD=1.209). Most industries also indicated that they do not have any history of violation of environmental regulations (Mean=3.38; STD=1.351). However, most industries also indicated that they operate in a highly regulated industry (Mean= 4.01; STD=1.137). They indicated that since they operate in highly regulated space, environmental regulation is one of the layers of regulations that are being popularized in their operations.

**Table 4-8: Descriptive Statistics on environmental compliance Items**

| STATEMENT   | N   | Mean  | Std Deviation |
|---|-----|-------|---------------|
| My organization operates in a highly regulated industry                               | 138 | 4.01  | 1.137         |
| My organization holds environmental operating permits                                 | 138 | 3.86  | 1.282         |
| My organization has a history of NEMA Environmental inspections                       | 136 | 3.86  | 1.260         |
| My organization has a history of compliance with environmental compliance regulations | 137 | 3.70  | 1.209         |
| My organization has no history of violations of environmental regulations             | 137 | 3.38  | 1.351         |
| Generally other companies in my industry comply with environmental regulation         | 138 | 2.35  | 1.144         |
| Valid N (listwise)  | 134 |       |               |
| Overall Mean  |     | 3.525 | 1.2305        |

*Source: Primary data, 2023*

Furthermore, when the sampled industries were asked regarding the compliance of other companies with the regulations, the study revealed a disagreement with the statement, as evidenced by a Mean = 2.35 and a standard deviation (STD) = 1.144. This means that much as the environmental regulations are in place, their enforcement remains to be desired. Several companies have been noted dumping waste, constructing factories in wetlands well knowing they are contravening the environmental regulations.

**Table 4-9: Descriptive Statistics for Policy Items**

| STATEMENT   | N   | Mean | Std Deviation |
|---|-----|------|---------------|
| My organization' environmental compliance policy includes written instructions to employees on how to handle environmental requests, visits from regulators and visits from regulators and visits from other enforcer | 138 | 3.47 | 1.128         |
| My organization's environment compliance policy is a adequately finance   | 136 | 3.28 | 1.257         |
| My organization's environmental compliance policy has a clearly stated purpose  | 137 | 3.60 | 1.101         |
| My organization's environmental compliance policy has board level representation  | 137 | 3.49 | 1.237         |
| My Organization's Board of directors receive reports on environmental compliance on a regular basis   | 135 | 3.73 | 1.009         |
| My organization has a specific individual identified as being responsible for the organization's enviro mental compliance policy  | 137 | 3.69 | 1.020         |
| My organization's environmental compliance policy is independent from the organizations management  | 135 | 2.90 | 1.053         |
| My organization has a mechanism to escalate environmental issues directly to the board of directors   | 136 | 3.54 | .965          |
| My organization has a helpline or other reporting mechanism on reporting environmental concerns   | 137 | 3.40 | .935          |
| My organization keep a record of all aspects of potential environmental compliance issues   | 137 | 3.72 | 1.259         |
| My organization keep a record of all disciplinary actions taken as result of environmental compliance issues  | 136 | 3.24 | 1.308         |

|  |     |       |        |
|--|-----|-------|--------|
| My organization has a realization prevention policy in place to protect those who report potential environmental compliance issues | 137 | 3.50  | 1.132  |
| My organization's environmental policy including is easily accessible to all employees   | 137 | 3.77  | .970   |
| Valid N (listwise)   | 130 |       |        |
| Overall Mean   |     | 3.486 | 1.1056 |

*Source: Primary data, 2023*

From table 4-9 above, the study assessed the effectiveness of compliance programs within the industries. The study revealed that a majority of the industries within the sample perceived the environmental compliance programs to be moderate effective. However, while most agreed with the assessment of effectiveness, the variability in their agreements were high as indicated by the high standard deviations. The issues that came out strong in the findings is that Access to environmental policy, reporting mechanisms for environmental concerns and escalation mechanisms to the Board were well developed and structured in each company (Mean= 3.77; Std=0.970, Mean=3.40; Std=0.935, Mean=3.54; Std=0.965). Therefore, over all the study revealed that much as compliance programs are in place in most industries, the effectiveness of these programs is still wanting.

**Table 4-10: Descriptive Statistics on Training Items**

| STATEMENT  | N   | Mean  | Std Deviation |
|--|-----|-------|---------------|
| Are all employees trained on a regular basis on environmental compliance topics  | 138 | 3.01  | 1.414         |
| Do those within your organization with responsibility for environmental compliance regularly attend external seminars and educational programs to ensure they are subject matter experts | 138 | 3.01  | 1.383         |
| Is environment compliance considered a factor in employee performance and bonus measures   | 138 | 2.51  | 1.291         |
| Valid N (listwise)   | 138 |       |               |
| Overall Mean   |     | 2.843 | 1.362         |

**Source: Primary data, 2023**

The study further noted that to elicit compliance, there are two aspects that can lead to compliance. Compliance can be voluntary or enforced. Training and communication on

environmental matters is central to eliciting compliance. The study revealed that most organizations do not comply with environment regulation due to the absence of training and communication. Most industries indicated their indifference to training and communications being done on environmental matters (Mean=2.843; STD =1.362)

**Table 4-11: A Summary of other Descriptive Statistics**

| statement on Compliance   | N   | Mean  | Std Deviation |
|---|-----|-------|---------------|
| Does your organization have a focal person/office regarding environmental matters | 138 | 1.39  | .490          |
| Does your organization has a written environmental compliance policy              | 138 | 1.30  | .462          |
| Generally other companies in my industry comply with environmental regulation     | 136 | 1.34  | .475          |
| Valid N (listwise)  | 136 |       |               |
| Overall Mean  |     | 1.343 | 0.4756        |

**Source: Primary data, 2023**

The investigation the data from the table 4-11 above, showed that the sampled industries did not have internal mechanism in place to address environmental matters. It has been observed that most companies did not have a focal person or officer in place to guide and oversee compliance with environmental matters (Mean= 1.39; STD=0.490). Furthermore, there was an observation that most companies did not have internal environmental policies in place (Mean=1.30; STD=0.462). As such compliance with environmental regulations is normally enforced externally. Hence, on the matter of compliance, the overall response was that most companies disagreed asserting that they did not have environmental structures embedded in the organizational structural processes (Mean=1.343; STD=0.4756).

#### **4.4 T-test for equality of means between manufacturing and service sectors.**

In this section, the study conducted a T-test with the aim of establishing whether there is a difference in means between manufacturing and service sectors on the study variables. The variables considered were compliance, environmental policy, and training.

##### **4.4.1. Compliance in Service and Manufacturing Firms**

To compare the organizations in terms of study variables above, the study conducted an independent sample T-test between manufacturing and services industries on enforcement

history variables. Based on equality of variances, the table indicates that there is a significant difference ( $p < .05$ ) between the two industries on the first item “my organization operates in a highly regulated industry”. All the others show no significant difference between the two sectors ( $p > .05$ ) in as far as enforcement history is concerned.

**Table 4-12: Group Statistics on Compliance**

| Group Statistics  |                         |    |      |                |                 |
|---|-------------------------|----|------|----------------|-----------------|
|   | Industry of Respondents | N  | Mean | Std. Deviation | Std. Error Mean |
| My organization operates in a highly regulated industry                               | Manufacturing           | 82 | 4.22 | 1.066          | .118            |
|   | Services                | 55 | 3.71 | 1.181          | .159            |
| My organization holds environmental operating permits                                 | Manufacturing           | 82 | 4.02 | 1.276          | .141            |
|   | Services                | 55 | 3.62 | 1.269          | .171            |
| My organization has a history of NEMA Environmental inspections                       | Manufacturing           | 82 | 4.01 | 1.291          | .143            |
|   | Services                | 54 | 3.63 | 1.186          | .161            |
| My organization has a history of compliance with environmental compliance regulations | Manufacturing           | 81 | 3.88 | 1.239          | .138            |
|   | Services                | 55 | 3.45 | 1.136          | .153            |
| My organization has no history of violations of environmental regulations             | Manufacturing           | 82 | 3.40 | 1.464          | .162            |
|   | Services                | 54 | 3.35 | 1.184          | .161            |
| Generally other companies in my industry comply with environmental regulation         | Manufacturing           | 82 | 2.23 | 1.200          | .132            |
|   | Services                | 55 | 2.53 | 1.052          | .142            |

**Source: Primary data, 2023**

There was an overwhelming opinion among both sectors as far as inspections are concerned. They both indicated that they are regularly inspected and pose environmental compliance clearance. The service and manufacturing sectors seem to abide by the set regulations by NEMA.

**Table 4-13: Independent samples T tests on Compliance**

|                                 |
|---------------------------------|
| <b>Independent Samples Test</b> |
|---------------------------------|

|   |                             | Levene's Test<br>for Equality<br>of Variances |      | t-test for Equality of Means |         |                     |                        |                                 |  |       |
|---|-----------------------------|---|------|------------------------------|---------|---------------------|------------------------|---------------------------------|--|-------|
|   |                             | F   | Sig. | t                            | df      | Sig. (2-<br>tailed) | Mean<br>Differen<br>ce | Std.<br>Error<br>Differen<br>ce | 95%<br>Confidence<br>Interval of the<br>Difference |       |
|   |                             |   |      |                              |         |                     |                        |                                 | Lower  | Upper |
| My organization operates in a highly regulated industry                               | Equal variances assumed     | 1.173   | .281 | 2.630                        | 135     | .010                | .510                   | .194                            | .127   | .894  |
|   | Equal variances not assumed |   |      | 2.577                        | 107.689 | .011                | .510                   | .198                            | .118   | .903  |
| My organization holds environmental operating permits                                 | Equal variances assumed     | .100  | .753 | 1.830                        | 135     | .069                | .406                   | .222                            | -.033  | .845  |
|   | Equal variances not assumed |   |      | 1.832                        | 116.401 | .069                | .406                   | .222                            | -.033  | .845  |
| My organization has a history of NEMA Environmental inspections                       | Equal variances assumed     | .033  | .857 | 1.745                        | 134     | .083                | .383                   | .219                            | -.051  | .816  |
|   | Equal variances not assumed |   |      | 1.776                        | 120.100 | .078                | .383                   | .215                            | -.044  | .809  |
| My organization has a history of compliance with environmental compliance regulations | Equal variances assumed     | .111  | .739 | 2.016                        | 134     | .046                | .422                   | .209                            | .008   | .836  |
|   | Equal variances not assumed |   |      | 2.050                        | 122.525 | .043                | .422                   | .206                            | .014   | .830  |
| My organization has no history of violations of environmental regulations             | Equal variances assumed     | 9.198   | .003 | .212                         | 134     | .832                | .051                   | .238                            | -.421  | .522  |
|   | Equal variances not assumed |   |      | .222                         | 128.342 | .825                | .051                   | .228                            | -.401  | .502  |
| Generally other companies in my industry comply with environmental regulation         | Equal variances assumed     | 1.384   | .241 | -1.484                       | 135     | .140                | -.296                  | .199                            | -.689  | .098  |

|  |                             |  |  |        |         |      |       |      |       |      |
|--|-----------------------------|--|--|--------|---------|------|-------|------|-------|------|
|  | Equal variances not assumed |  |  | -1.523 | 125.622 | .130 | -.296 | .194 | -.680 | .088 |
|--|-----------------------------|--|--|--------|---------|------|-------|------|-------|------|

Source: Primary data, 2023

#### 4.4.2 Service and Manufacturing Firms in terms Policy Provisions

This dimension was measured with 10 items as shown in tables 4-14 and 4-15 below. These tables indicate that only the items “My Organization's Board of directors receive reports on environmental compliance on a regular basis” and “My organization' environmental compliance policy includes written instructions to employees on how to handle environmental requests, visits from regulators and visits from regulators and visits from other enforcement” were significantly different ( $P < .05$ ). The rest were not significantly different ( $P > .05$ ).

**Table 4-14: Group statistics on Compliance Policy**

| Group Statistics   |                         |    |      |                |                 |
|--|-------------------------|----|------|----------------|-----------------|
|  | Industry of Respondents | N  | Mean | Std. Deviation | Std. Error Mean |
| My organization' environmental compliance policy includes written instructions to employees on how to handle environmental requests, visits from regulators and visits from regulators and visits from other enforce | Manufacturing           | 82 | 3.48 | 1.259          | .139            |
|  | Services                | 55 | 3.47 | .920           | .124            |
| My organization's environment compliance policy is a adequately finance  | Manufacturing           | 80 | 3.36 | 1.285          | .144            |
|  | Services                | 55 | 3.18 | 1.219          | .164            |
| My organization's environmental compliance policy has a clearly stated purpose   | Manufacturing           | 81 | 3.70 | 1.188          | .132            |
|  | Services                | 55 | 3.45 | .959           | .129            |
| My organization's environmental compliance policy has an execute or board level representation   | Manufacturing           | 81 | 3.57 | 1.284          | .143            |
|  | Services                | 55 | 3.40 | 1.164          | .157            |
| My Organization's Board of directors receive reports on environmental compliance on a regular basis  | Manufacturing           | 79 | 3.75 | 1.138          | .128            |
|  | Services                | 55 | 3.73 | .804           | .108            |
| My organization has a specific individual identified as being responsible for the organization's enviro mental compliance policy   | Manufacturing           | 81 | 3.64 | 1.099          | .122            |
|  | Services                | 55 | 3.76 | .902           | .122            |
| My Organization's environmental compliance policy is independent from the  | Manufacturing           | 79 | 3.03 | 1.154          | .130            |

|  |               |    |      |       |      |
|--|---------------|----|------|-------|------|
| organizations management   | Services      | 55 | 2.73 | .870  | .117 |
| My organization has a mechanism to escalate environmental issues directly to the board of directors                                | Manufacturing | 80 | 3.58 | 1.053 | .118 |
|  | Services      | 55 | 3.47 | .836  | .113 |
| My organization has a helpline or other reporting mechanism on reporting environmental concerns                                    | Manufacturing | 81 | 3.52 | .976  | .108 |
|  | Services      | 55 | 3.22 | .854  | .115 |
| My organization keep a record of all aspects of potential environmental compliance issues  | Manufacturing | 81 | 3.77 | 1.197 | .133 |
|  | Services      | 55 | 3.64 | 1.352 | .182 |
| My organization keep a record of all disciplinary actions taken as result of environmental compliance issues                       | Manufacturing | 81 | 3.41 | 1.253 | .139 |
|  | Services      | 54 | 3.02 | 1.367 | .186 |
| My organization has a realization prevention policy in place to protect those who report potential environmental compliance issues | Manufacturing | 81 | 3.60 | 1.158 | .129 |
|  | Services      | 55 | 3.36 | 1.095 | .148 |
| My organization's environmental policy including is easily accessible to all employees   | Manufacturing | 81 | 3.81 | 1.038 | .115 |
|  | Services      | 55 | 3.73 | .870  | .117 |

**Source Primary Data, 2023**

**Table 4-15: T-test on Policy**

| <b>Independent Samples Test</b>           |                         |   |      |                              |     |                 |                 |                       |   |       |
|---|-------------------------|---|------|------------------------------|-----|-----------------|-----------------|-----------------------|---|-------|
|   |                         | Levene's Test for Equality of Variances |      | t-test for Equality of Means |     |                 |                 |                       |   |       |
|   |                         | F                                       | Sig. | t                            | df  | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |       |
|   |                         |   |      |                              |     |                 |                 |                       | Lower                                     | Upper |
| My organization' environmental compliance | Equal variances assumed | 8.876                                   | .003 | .015                         | 135 | .988            | .003            | .198                  | -.389                                     | .394  |



|   |                             |       |      |       |             |      |       |      |       |      |
|---|-----------------------------|-------|------|-------|-------------|------|-------|------|-------|------|
| policy includes written instructions to employees on how to handle environmental requests, visits from regulators and visits from other enforce | Equal variances not assumed |       |      | .015  | 133.9<br>61 | .988 | .003  | .186 | -.366 | .371 |
| My organization's environment compliance policy is a adequately finance   | Equal variances assumed     | 1.094 | .298 | .820  | 133         | .414 | .181  | .220 | -.255 | .617 |
|   | Equal variances not assumed |       |      | .828  | 120.1<br>46 | .409 | .181  | .218 | -.251 | .613 |
| My organization's environmental compliance policy has a clearly stated purpose  | Equal variances assumed     | 4.228 | .042 | 1.295 | 134         | .198 | .249  | .192 | -.131 | .630 |
|   | Equal variances not assumed |       |      | 1.349 | 129.9<br>46 | .180 | .249  | .185 | -.116 | .615 |
| My organization's environmental compliance policy has an execute or board level representation  | Equal variances assumed     | 1.167 | .282 | .777  | 134         | .439 | .168  | .216 | -.260 | .595 |
|   | Equal variances not assumed |       |      | .792  | 123.2<br>66 | .430 | .168  | .212 | -.252 | .588 |
| My Organization's Board of directors receive reports on environmental compliance on a regular basis   | Equal variances assumed     | 6.177 | .014 | .110  | 132         | .913 | .020  | .178 | -.333 | .372 |
|   | Equal variances not assumed |       |      | .117  | 131.9<br>59 | .907 | .020  | .168 | -.312 | .351 |
| My organization has a specific individual identified as being responsible for the organization's environmental compliance policy                | Equal variances assumed     | 3.264 | .073 | -.680 | 134         | .498 | -.122 | .179 | -.476 | .232 |
|   | Equal variances not assumed |       |      | -.706 | 129.1<br>55 | .481 | -.122 | .172 | -.463 | .219 |
| My organization's environmental compliance policy is independent from the organizations management  | Equal variances assumed     | 2.039 | .156 | 1.620 | 132         | .108 | .298  | .184 | -.066 | .662 |
|   | Equal variances not assumed |       |      | 1.703 | 131.1<br>15 | .091 | .298  | .175 | -.048 | .644 |

|  |                             |       |      |       |             |      |      |      |       |      |
|--|-----------------------------|-------|------|-------|-------------|------|------|------|-------|------|
| My organization has a mechanism to escalate environmental issues directly to the board of directors                                | Equal variances assumed     | 2.342 | .128 | .602  | 133         | .548 | .102 | .170 | -.234 | .439 |
|  | Equal variances not assumed |       |      | .628  | 130.1<br>85 | .531 | .102 | .163 | -.220 | .425 |
| My organization has a helpline or other reporting mechanism on reporting environmental concerns                                    | Equal variances assumed     | 1.733 | .190 | 1.851 | 134         | .066 | .300 | .162 | -.021 | .621 |
|  | Equal variances not assumed |       |      | 1.899 | 125.5<br>90 | .060 | .300 | .158 | -.013 | .613 |
| My organization keep a record of all aspects of potential environmental compliance issues  | Equal variances assumed     | .699  | .404 | .586  | 134         | .559 | .129 | .220 | -.307 | .565 |
|  | Equal variances not assumed |       |      | .572  | 106.3<br>92 | .569 | .129 | .226 | -.318 | .576 |
| My organization keep a record of all disciplinary actions taken as result of environmental compliance issues                       | Equal variances assumed     | .329  | .567 | 1.704 | 133         | .091 | .389 | .228 | -.063 | .840 |
|  | Equal variances not assumed |       |      | 1.674 | 106.8<br>11 | .097 | .389 | .232 | -.072 | .849 |
| My organization has a realization prevention policy in place to protect those who report potential environmental compliance issues | Equal variances assumed     | .515  | .474 | 1.219 | 134         | .225 | .241 | .198 | -.150 | .633 |
|  | Equal variances not assumed |       |      | 1.232 | 120.3<br>58 | .220 | .241 | .196 | -.146 | .629 |
| My organization's environmental policy including is easily accessible to all employees   | Equal variances assumed     | 1.418 | .236 | .514  | 134         | .608 | .088 | .170 | -.249 | .424 |
|  | Equal variances not assumed |       |      | .532  | 128.0<br>58 | .596 | .088 | .165 | -.238 | .413 |

**Source: Primary data, 2023**

The study also conducted a Levene T-test to evaluate the effectiveness of environmental compliance programs in Uganda. A total of thirteen items were tested in the study. The study revealed that out of the thirteen items tested, only three items were significant to the study. Most organizations reported having clear environmental policies in place and that they were well

communicated to all staff within the organizations. Furthermore, they also indicated having regular visits from environmental inspectors as indicated in table 4-15 above. In as far as receiving environmental compliance reports at board level is concerned, the research demonstrated that most companies have board fully constituted and environmental reporting standards are adequately followed including submission of relevant reports. The research additionally executed a group statistical analysis focusing on environmental training and communication.

#### 4.4.3 Comparison between service and manufacturing firms in terms Training

The study grouped the respondents by industry type, the group statistical mean and standard deviation were tested. Training and communication were tested on three dimensions. These dimensions were measured with 3 items as indicated in tables 4-16 and 4-17. The study revealed that the first two items were significantly different ( $P < 0.05$ ) while the third was not ( $P > .05$ ).

**Table 4-16: Group Statistics on Training**

| Group Statistics   |                         |    |      |                |                 |
|--|-------------------------|----|------|----------------|-----------------|
|  | Industry of Respondents | N  | Mean | Std. Deviation | Std. Error Mean |
| Are all employees trained on a regular basis on environmental compliance topics  | Manufacturing           | 82 | 3.20 | 1.461          | .161            |
|  | Services                | 55 | 2.78 | 1.301          | .175            |
| Do those within your organization with responsibility for environmental compliance regularly attend external seminars and educational programs to ensure they are subject matter experts | Manufacturing           | 82 | 3.23 | 1.382          | .153            |
|  | Services                | 55 | 2.73 | 1.326          | .179            |
| Is environment compliance considered a factor in employee performance and bonus measures   | Manufacturing           | 82 | 2.63 | 1.329          | .147            |
|  | Services                | 55 | 2.36 | 1.223          | .165            |

Source: Primary data, 2023

Drawing from table 4-16, the study indicated that employees withing the manufacturing sectors were more frequently trained on environmental compliance than those in the service sector, as

evidence by a Mean=3.20; and a Std=1.461 for the former and a Mean=2.78; and a Std=1.301 for the later. As far as attendance of environmental compliance seminars and programs are concerned, most respondents in the manufacturing sector showed great interest in attending environmental seminars and programs compared to their counterparts in the service sectors (Mean = 3.23; Std= 1.382: Mean = 2.73; Std=1.326). However, much as they were differences in opinion between the two groups, they all disagreed that environmental compliance was considered a factor in performance and bonus (Mean= 2.61; STD = 1.329: Mean = 2.36; STD= 1.223)

**Table 4-17: T-test on Training**

| Independent Samples Test  |                             |   |      |                              |         |                 |                 |                       |   |       |
|---|-----------------------------|---|------|------------------------------|---------|-----------------|-----------------|-----------------------|---|-------|
|   |                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |         |                 |                 |                       |   |       |
|   |                             | F                                       | Sig. | t                            | df      | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference |       |
|   |                             |   |      |                              |         |                 |                 |                       | Lower                                     | Upper |
| Are all employees trained on a regular basis on environmental compliance topics | Equal variances assumed     | 3.133                                   | .079 | 1.695                        | 135     | .092            | .413            | .244                  | -.069                                     | .896  |
|   | Equal variances not assumed |   |      | 1.734                        | 124.573 | .085            | .413            | .238                  | -.058                                     | .885  |
| Do those within your organization with  | Equal variances assumed     | .040                                    | .842 | 2.129                        | 135     | .035            | .504            | .237                  | .036                                      | .973  |

|   |                             |      |      |       |             |      |      |      |       |      |
|---|-----------------------------|------|------|-------|-------------|------|------|------|-------|------|
| responsibility for environmental compliance regularly attend external seminars and educational programs to ensure they are subject matter experts | Equal variances not assumed |      |      | 2.146 | 119.16<br>6 | .034 | .504 | .235 | .039  | .970 |
| Is environment compliance considered a factor in employee performance and bonus measures  | Equal variances assumed     | .558 | .457 | 1.206 | 135         | .230 | .271 | .224 | -.173 | .714 |
|   | Equal variances not assumed |      |      | 1.226 | 122.28<br>6 | .223 | .271 | .221 | -.166 | .707 |

**Source: Primary data, 2023**

Referring to Table 4-17, when Levine’s test for equality of variance was conducted, the study revealed that the first two items were significantly different ( $P < 0.05$ ) while the third was not ( $P > .05$ ).

#### 4.5 Reliability of the Research Instrument

This refers to the ability of the instrument to provide the same data consistently under similar conditions (Burns, 1997) in (Odia, 2009). The researcher used a pre-test to measure the reliability of the instruments. Reliability was tested by performing the Cronbach’s Alpha coefficient tests. According to Mugenda and Mugenda (2003), results of 0.6 and above are reliable for both independent and dependent variables. The reliability results are shown in table 4-18 below:

**Table 4-18: Reliability Matrix for compliance, policy, and Training Variables.**

| S/N | Variable   | Items | Cronbach Alpha |              |
|-----|------------|-------|----------------|--------------|
| 5   | Compliance | 6     | 0.836          | Compliance   |
| 6   | Policies   | 13    | 0.906          | Org. Factors |
| 7   | Training   | 3     | 0.860          |              |

**Source: Primary Data, 2023**

The results from the study in table 4-18 above, Compliance, policies, and Training had alpha > 0.7 (Nunnally and Bernstein, 1994). Fairness has alpha =0.6. This is acceptable for new scales.

## 4.6 Correlation and Regression Results

Table 4-19 presents a descriptive analysis of the variables under study, derived from the sample comprising 138 firms.

**Table 4-19: Descriptive statistics**

| Descriptive Statistics |        |                |     |
|------------------------|--------|----------------|-----|
|                        | Mean   | Std. Deviation | N   |
| Compliance             | 3.5227 | .91509         | 138 |
| Policy                 | 3.4913 | .75582         | 138 |
| Training               | 2.8478 | 1.20564        | 138 |

**Source: Primary data, 2023**

Since 138 firms were in the study, this was above the minimum 30 firms ( $N > 30$ ). The study further conducted a correlational analysis. To determine the relationship between Compliance and Organizational level variables (training and policy). To establish this relationship a Pearson's Product Moment Correlation Coefficient was pre-ceded by testing for the linearity of the data that was collected. A scatter diagram was drawn with a line of best fit to capture this data format. The correlation analysis data is presented in table 4-20 below.

**Table 4-20: Correlation analysis**

| Correlations        |            |            |        |          |
|---------------------|------------|------------|--------|----------|
|                     |            | Compliance | Policy | Training |
| Pearson Correlation | Compliance | 1.000      | .557   | .553     |
|                     | Policy     | .557       | 1.000  | .677     |
|                     | Training   | .553       | .677   | 1.000    |
| Sig. (1-tailed)     | Compliance | .          | .000   | .000     |
|                     | Policy     | .000       | .      | .000     |
|                     | Training   | .000       | .000   | .        |
| N                   | Compliance | 138        | 138    | 138      |

|  |          |     |     |     |
|--|----------|-----|-----|-----|
|  | Policy   | 138 | 138 | 138 |
|  | Training | 138 | 138 | 138 |

**Source: Primary data, 2023**

As depicted in table 4-20 there is a positive and significant correlation between policy and training ( $r=0.557$ ;  $r=0.553$ ) respectively. This implies that as an organization conducts training programs on environment and have policies in place that enforce self-compliance, then in actual sense this will elicit compliance with environmental regulations. Therefore, as firms strengthen their policy stands on environment and conduct training, then environmental compliance will be enhanced in the same direction.

To determine the causal effect, the study conducted a regression analysis of the data. The data collected was analyzed to verify the causal effects that elicit compliance. Using regression analysis, the  $\beta$  coefficient from the equation represented the strength and direction of the relationship between the variables being studied.

**Table 4-21: Regression Analysis**

| Regression Coefficients <sup>a</sup> |            |                             |            |                           |       |      |
|--------------------------------------|------------|-----------------------------|------------|---------------------------|-------|------|
| Model                                |            | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. |
|                                      |            | B                           | Std. Error | Beta                      |       |      |
| 1                                    | (Constant) | 1.398                       | .303       |                           | 4.610 | .000 |
|                                      | Policy     | .407                        | .113       | .337                      | 3.616 | .000 |
|                                      | Training   | .247                        | .071       | .325                      | 3.493 | .001 |

a. Dependent Variable: Comply\_var

**Source: Primary Data, 2023**

The table 4-21 above shows that training predicts compliance ( $\text{Beta}=0.325$   $p<0.000$ ). Similarly, policy also influences compliance ( $\text{Beta}=0.337$ ;  $p=0.000$ ). The research highlighted that much as training and environmental policy dimension were statistically significant, they both drive environmental compliance by 66.2%. Therefore 33.8% of environmental compliance is explained by other factors that are not covered in this study. Considering the importance of

policy, factor analysis of the policy variable was done, and two dimensions emerged namely structure which had 4 items each with a factor loading above 0.5 while policy dimension has 8 items each of which has a factor loading greater than 0.5 as seen in table 4-22 below.

**Table 4-22: Principal Component Analysis**

| <b>Rotated Component Matrix<sup>a,b</sup></b>  |           |      |
|--|-----------|------|
|  | Component |      |
|  | 1         | 2    |
| My organization' environmental compliance policy includes written instructions to employees on how to handle environmental requests, visits from regulators and visits from regulators and visits from other enforce | .767      |      |
| My organization's environment compliance policy is adequately finance  | .698      |      |
| My organization's environmental compliance policy has a clearly stated purpose   | .894      |      |
| My organization's environmental compliance policy has an execute or board level representation   | .904      |      |
| My Organization's Board of directors receive reports on environmental compliance on a regular basis  | .831      |      |
| My organization has a specific individual identified as being responsible for the organization's environmental compliance policy   | .724      |      |
| My organization's environmental compliance policy is independent from the organizations management   |           | .508 |
| My organization has a mechanism to escalate environmental issues directly to the board of directors  |           | .752 |
| My organization has a helpline or other reporting mechanism on reporting environmental concerns  |           | .862 |
| My organization keep a record of all aspects of potential environmental compliance issues  |           | .739 |
| My organization keep a record of all disciplinary actions taken as result of environmental compliance issues   | .708      |      |
| My organization has a realization prevention policy in place to protect those who report potential environmental compliance issues   | .650      |      |
| My organization's environmental policy including is easily accessible to all employees   | .513      |      |
| Extraction Method: Principal Component Analysis.   |           |      |
| Rotation Method: Varimax with Kaiser Normalization. <sup>a,b</sup>   |           |      |



a. Rotation converged in 3 iterations.

b. Only cases for which Industry of Respondents = Manufacturing are used in the analysis phase.

**Source: Primary Data, 2023**

The data from table 4-22 above, showed that all the dimensions that were measured in the study were critical in explain the factors that elicit environmental compliance among manufacturing firms and service forms as well. All the dimension between service firm and industry firms scored above 0.5.

**4.7 Regression of Firm Background information to Compliance**

The study further, regressed compliance, policy issues and training constructs against the location, time in firm age, industry type and firm size by number of employees. The primary focus was to explain the extent to which a firm’s location, firm age and size, industry type explain the level of compliance to environmental constructs measured in the study.

**4.7.1 Extent to which Firm Location influences Environmental Compliance**

The study regressed firm location to environmental compliance variables. According to table 4-20 below, location (Nakawa Division) yielded a total of more than 30 firms (N>30). This is statistically acceptable for this procedure of analysis.

**Table 4-23: Location of Firms in Nakawa Division**

| Descriptive Statistics <sup>a</sup> |        |                |    |
|-------------------------------------|--------|----------------|----|
|                                     | Mean   | Std. Deviation | N  |
| Compliance                          | 4.4063 | .60603         | 32 |
| Policy                              | 3.8660 | .46202         | 32 |
| Training                            | 3.2604 | .58496         | 32 |

a. Selecting only cases for which Location of Respondents = Nakawa Division

**Source: Primary Data, 2023**

Table 4-24 shows that most of the companies that were in Nakawa Division in Kampala exhibited keen interest in developing environmental policies (Beta .642 p< .05). Most of these companies due to their proximity to the Central Business District stated that they were prone to

environmental police check from time to time and so they indicated placing strong emphasis on environmental policies in their operations.

**Table 4-24: Regression of Location of the Firm to environmental constructs**

| Coefficients <sup>a,b</sup>   |            |                             |            |                           |       |      |
|---|------------|-----------------------------|------------|---------------------------|-------|------|
| Model   |            | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. |
|   |            | B                           | Std. Error | Beta                      |       |      |
| 1   | (Constant) | 1.092                       | .798       |                           | 1.369 | .182 |
|   | Policy     | .842                        | .190       | .642                      | 4.428 | .000 |
|   | Training   | .018                        | .150       | .017                      | .119  | .906 |
| a. Dependent Variable: Comply_var   |            |                             |            |                           |       |      |
| b. Selecting only cases for which Location of Respondents = Nakawa Division |            |                             |            |                           |       |      |

**Source: Primary Data, 2023**

However, much as most firms in this area care about policies (Beta= .642  $p < .05$ ), the study revealed that they did not take training seriously (Beta =.017  $p < .05$ ). Moreover we there were no evidence indicating that these firms in Nakawa had trained their employees on environmental compliance matters.

The research went through the firms that are in Kawempe Division as shown in table 4-25 below. From the table 4-25 below, a total of 33 firms were selected which is statistically sufficient to run this procedure (Kawempe,  $N > 30$ )

**Table 4-25: Location of Firms in Kawempe Division**

| Descriptive Statistics <sup>a</sup>  |        |                |    |
|--|--------|----------------|----|
|  | Mean   | Std. Deviation | N  |
| Compliance   | 3.8687 | .70804         | 33 |
| Policy   | 4.0672 | 1.00191        | 33 |
| Training   | 4.0606 | 1.10383        | 33 |
| a. Selecting only cases for which Location of Respondents = Kawempe Division |        |                |    |

**Source: Primary Data, 2023**

Referring to table 4-25, the majority of firms in this location concurred that the environmental construct being measured in the research (namely Compliance, Policy and Training) were important to their operations.

However, then the data was regressed, the study indicated that most forms in Kawempe Divion had environmental policies in place and those policies were taken seriously (Beta =.979  $p < .05$ ) as shown in table 4-26 below.

**Table 4-26: Regression of Location of the Firm in Kawempe on environmental constructs.**

| Coefficients <sup>a,b</sup>  |            |                             |            |                           |       |      |
|--|------------|-----------------------------|------------|---------------------------|-------|------|
| Model  |            | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. |
|  |            | B                           | Std. Error | Beta                      |       |      |
| 1  | (Constant) | 2.062                       | .419       |                           | 4.927 | .000 |
|  | Policy     | .692                        | .276       | .979                      | 2.511 | .018 |
|  | Training   | -.248                       | .250       | -.387                     | -.992 | .329 |
| a. Dependent Variable: Comply_var  |            |                             |            |                           |       |      |
| b. Selecting only cases for which Location of Respondents = Kawempe Division |            |                             |            |                           |       |      |

**Source: Primary Data, 2023**

In a surprise twist, while firms in this division take policies seriously (Beta =.979  $p < .05$ ), the study indicated that training was not taken seriously (Beta =-.387  $p < .05$ ). This could be due to number of reasons that this study could not explore.

**Table 4-27: Location of Firms in Central Division**

| Descriptive Statistics <sup>a</sup> |        |                |   |
|-------------------------------------|--------|----------------|---|
|                                     | Mean   | Std. Deviation | N |
| Compliance                          | 2.8250 | .50450         | 8 |
| Policy                              | 3.2019 | .49841         | 8 |
| Training                            | 1.5000 | .56344         | 8 |

a. Selecting only cases for which Location of Respondents = Kampala Central Division

**Source: Primary Data, 2023**

Firm locate in the Central Division were also grouped together. However, only 8 companies were in the central division. Regression for central division was not conducted since  $N < 30$ . This is attributed to the Government policy to designate Industrial parks outside the Central Business District. However, most of these firms presented mixed views on environmental concerns of compliance, policy and training (Mean=8.8250; STD=0.50450: Mean 3.2019; STD=0.49841: Mean=1.5; STD=0.56344). Given the location of central division, most firms seem to be well established with strong political linkages. This might explain their mixed reactions to environmental matters.

Furthermore, the study also looks at the firms that are in the Wakiso Division as shown in table 4-28 below.

**Table 4-28: Location of Firms in Wakiso Division**

| Descriptive Statistics <sup>a</sup> |        |                |    |
|-------------------------------------|--------|----------------|----|
|                                     | Mean   | Std. Deviation | N  |
| Compliance                          | 2.9240 | .68738         | 32 |
| Policy                              | 3.0583 | .31722         | 32 |
| Training                            | 2.1979 | .72764         | 32 |

a. Selecting only cases for which Location of Respondents = Wakiso

**Source: Primary Data, 2023**

The study revealed that environmental compliance and policy were issues most companies in this area stressed (Mean=2.9240; STD=0.68738: Mean=3.0583; STD=0.31722). Training on environment issues had mixed reactions. Regression for Wakiso division was conducted since  $N > 30$  as seen in the Table 4-29 below.

The investigation found that firms that were in these areas take training seriously (beta .382  $p < .05$ ). This might also be attributed to the nature of this area. Most industrial parks located in

this area which has attracted several global companies like Coca Cola, Toyota etc. Their global experience with environmental concerns is better than those of the local companies.

**Table 4-29: Regression of Location of the Firm in Wakiso**

| Coefficients <sup>a,b</sup>  |            |                             |            |                           |        |      |
|--|------------|-----------------------------|------------|---------------------------|--------|------|
| Model  |            | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig. |
|  |            | B                           | Std. Error | Beta                      |        |      |
| 1  | (Constant) | 4.034                       | 1.183      |                           | 3.412  | .002 |
|  | Policy     | -.623                       | .350       | -.287                     | -1.779 | .086 |
|  | Training   | .361                        | .153       | .382                      | 2.366  | .025 |
| a. Dependent Variable: Comply_var                                  |            |                             |            |                           |        |      |
| b. Selecting only cases for which Location of Respondents = Wakiso |            |                             |            |                           |        |      |

**Source: Primary Data, 2023**

However, the study revealed that these same companies did not have clear and executed environmental policies in place as shown by the negative beta values (Beta=-0.287 p>.05)

**Table 4-30: Regression of Location of the Firm in Mukono**

| Descriptive Statistics <sup>a</sup>                                |        |                |    |
|--|--------|----------------|----|
|  | Mean   | Std. Deviation | N  |
| Compliance   | 3.0198 | .74415         | 32 |
| Policy   | 2.9928 | .32832         | 32 |
| Training   | 2.1667 | 1.04727        | 32 |
| a. Selecting only cases for which Location of Respondents = Mukono |        |                |    |

**Source: Primary Data, 2023**

For firms located in Mukono District, a total of 32 firms were visited. A Regression for firms located in Mukono was conducted since N>30 as seen in the Table 4-31 below.

**Table 4-31: Regression of Location of the Firm in Mukono**

| Coefficients <sup>a,b</sup>  |            |                             |            |                           |       |      |
|--|------------|-----------------------------|------------|---------------------------|-------|------|
| Model  |            | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. |
|  |            | B                           | Std. Error | Beta                      |       |      |
| 1  | (Constant) | 1.938                       | 1.265      |                           | 1.532 | .136 |
|  | Policy     | .237                        | .407       | .104                      | .582  | .565 |
|  | Training   | .172                        | .127       | .242                      | 1.351 | .187 |
| a. Dependent Variable: Comply_var                                  |            |                             |            |                           |       |      |
| b. Selecting only cases for which Location of Respondents = Mukono |            |                             |            |                           |       |      |

**Source: Primary Data, 2023**

The analysis showed that firms in Mukono do not seem to care about putting policies in place and training their workers since in both cases Beta= 0.104  $p>.05$ ; Beta=0.242  $p>.05$ .

#### 4.7.2 Extent to which Industry type elicits Environmental Compliance

The study further divided the respondents into two major industry categories i.e. manufacturing and service firms. The purpose was to assess how the two categories perform in terms of environmental compliance.

**Table 4-32: Descriptive analysis for Manufacturing Firms**

| Descriptive Statistics <sup>a</sup>                                       |        |                |    |
|---|--------|----------------|----|
|   | Mean   | Std. Deviation | N  |
| Compliance  | 3.6248 | .91841         | 82 |
| Policy  | 3.5601 | .84602         | 82 |
| Training  | 3.0203 | 1.21980        | 82 |
| a. Selecting only cases for which Industry of Respondents = Manufacturing |        |                |    |

For firms associated with manufacturing, a total of 82 firms were visited. A regression for the industry type of firms was conducted since  $N>30$  as seen in the regression Table 4-33 below.

**Table 4-33: Regression results for manufacturing**

| Coefficients <sup>a,b</sup>   |            |                             |            |                           |       |      |
|---|------------|-----------------------------|------------|---------------------------|-------|------|
| Model   |            | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. |
|   |            | B                           | Std. Error | Beta                      |       |      |
| 1   | (Constant) | 1.921                       | .382       |                           | 5.024 | .000 |
|   | Policy     | .229                        | .159       | .211                      | 1.439 | .154 |
|   | Training   | .294                        | .111       | .390                      | 2.657 | .010 |
| a. Dependent Variable: Comply_var   |            |                             |            |                           |       |      |
| b. Selecting only cases for which Industry of Respondents = Manufacturing |            |                             |            |                           |       |      |

**Source: Primary data, 2023**

The study revealed that Manufacturing firms exhibited training of their workers (beta .39  $p < .05$ ) as a critical part of their operations. It was further evidenced that most employees in the manufacturing sector were acutely aware and had attended some training in one form or another.

**Table 4-34: Descriptive Statistics of Service Industries**

| Descriptive Statistics <sup>a</sup>                                  |        |                |    |
|--|--------|----------------|----|
|  | Mean   | Std. Deviation | N  |
| Compliance   | 3.3836 | .90226         | 55 |
| Policy   | 3.3976 | .59589         | 55 |
| Training   | 2.6242 | 1.13865        | 55 |
| a. Selecting only cases for which Industry of Respondents = Services |        |                |    |

For firms associated to services, a total of 55 firms were visited. A regression for firm's industry type was conducted since  $N > 30$  as seen in the regression Table 4-30 below.

**Table 4-35: Regression results for Firms in Service Industry**

| Coefficients <sup>a,b</sup> |  |  |  |  |  |  |
|-----------------------------|--|--|--|--|--|--|
|-----------------------------|--|--|--|--|--|--|

| Model  |            | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. |
|--|------------|-----------------------------|------------|---------------------------|-------|------|
|  |            | B                           | Std. Error | Beta                      |       |      |
| 1  | (Constant) | .137                        | .523       |                           | .263  | .794 |
|  | Policy     | .781                        | .170       | .516                      | 4.601 | .000 |
|  | Training   | .226                        | .089       | .286                      | 2.551 | .014 |
| a. Dependent Variable: Comply_var                                    |            |                             |            |                           |       |      |
| b. Selecting only cases for which Industry of Respondents = Services |            |                             |            |                           |       |      |

**Source: Primary data, 2023**

When regressed against firms that are in the service industry, the study revealed that firms in the service industry cared more on policies and Training since  $p < .05$  in both cases.

#### 4.7.3 Extent to which Firm Age elicits Environmental Compliance

The study regressed firms age (duration in business) with the level of compliance with environmental issues. The purpose was to assess the extent to which duration in business elicits compliance among these companies.

i) Businesses below 2 years were only 5 so no regressions were done.

**Table 4-36: Descriptive Statistics of Duration in Business.**

| Descriptive Statistics <sup>a</sup>                                |        |                |    |
|--|--------|----------------|----|
|  | Mean   | Std. Deviation | N  |
| Compliance   | 3.2228 | .80709         | 54 |
| Policy   | 3.4091 | .77354         | 54 |
| Training   | 2.8642 | 1.35597        | 54 |
| a. Selecting only cases for which Duration in Business = 3-5 Years |        |                |    |

**Source: Primary data, 2023**

For firms that have been in business between 3-5 years, a total of 54 firms were visited. A Regression for firm's duration in business was conducted since  $N > 30$  as seen in the regression Table 4-36 below.



**Table 4-37 Regression results for Duration in business and Compliance.**

| Coefficients <sup>a,b</sup>  |            |                             |            |                           |       |      |
|--|------------|-----------------------------|------------|---------------------------|-------|------|
| Model  |            | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. |
|  |            | B                           | Std. Error | Beta                      |       |      |
| 1  | (Constant) | 1.396                       | .391       |                           | 3.574 | .001 |
|  | Policy     | .325                        | .147       | .312                      | 2.217 | .031 |
|  | Training   | .251                        | .084       | .421                      | 2.991 | .004 |
| a. Dependent Variable: Comply_var                                  |            |                             |            |                           |       |      |
| b. Selecting only cases for which Duration in Business = 3-5 Years |            |                             |            |                           |       |      |

**Source: Primary data, 2023**

From table 4-36 above, the study revealed that businesses 3-5 years old indicated that they care about both training and policies with  $p < .05$  in both cases. Therefore, this indicates that a unit change in duration in business will elicit environmental training by 42.1% followed by policy provision by 31.2%.

**Table 4-38: Descriptive Statistics of Duration in Business**

| Descriptive Statistics <sup>a</sup>                                   |        |                |    |
|---|--------|----------------|----|
|   | Mean   | Std. Deviation | N  |
| Compliance  | 3.7589 | .92393         | 77 |
| Policy  | 3.6006 | .70079         | 77 |
| Training  | 2.9004 | 1.08021        | 77 |
| a. Selecting only cases for which Duration in Business = Over 5 years |        |                |    |

**Source: Primary data, 2023**

For firms that have been in business for over 5 years, a total of 77 firms were visited. A Regression for firm's duration in business was conducted since  $N > 30$  as seen in the regression Table 4-39 below.

**Table 4-39 Regression results for Duration in business and Compliance**

| Coefficients <sup>a,b</sup>   |            |                             |            |                           |       |      |
|---|------------|-----------------------------|------------|---------------------------|-------|------|
| Model   |            | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. |
|   |            | B                           | Std. Error | Beta                      |       |      |
| 1   | (Constant) | 1.301                       | .456       |                           | 2.851 | .006 |
|   | Policy     | .479                        | .162       | .364                      | 2.951 | .004 |
|   | Training   | .252                        | .105       | .295                      | 2.392 | .019 |
| a. Dependent Variable: Comply_var                                     |            |                             |            |                           |       |      |
| b. Selecting only cases for which Duration in Business = Over 5 years |            |                             |            |                           |       |      |

**Source: Primary data, 2023**

From Table 4-39 above, the study revealed that businesses that are above 5 years old indicated that they care about both training and policies with  $p < .05$  in both cases.

**4.7.4 Extent to which Firm Size elicits Environmental Compliance**

**Table 4-40 Descriptive Statistics of Firm Size**

| Descriptive Statistics <sup>a</sup>                          |        |                |    |
|--|--------|----------------|----|
|  | Mean   | Std. Deviation | N  |
| Compliance   | 3.5124 | .97358         | 35 |
| Policy   | 3.3610 | .75175         | 35 |
| Training   | 2.5048 | 1.18645        | 35 |
| a. Selecting only cases for which Number of Employees = 1-50 |        |                |    |

**Source: Primary data, 2023**

For firms that have between 1-50 employees, a total of 35 firms was visited. A Regression for firm’s size in terms of number of employees was conducted since  $N > 30$  as seen in the regression Table 4-40 below.

**Table 4-41 Regression results for Firm Size and Compliance**

| Coefficients <sup>a,b</sup>                                  |            |                             |            |                           |       |      |
|--|------------|-----------------------------|------------|---------------------------|-------|------|
| Model  |            | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. |
|  |            | B                           | Std. Error | Beta                      |       |      |
| 1  | (Constant) | .979                        | .641       |                           | 1.528 | .136 |
|  | Policy     | .658                        | .247       | .508                      | 2.662 | .012 |
|  | Training   | .128                        | .157       | .156                      | .818  | .419 |
| a. Dependent Variable: Comply_var                            |            |                             |            |                           |       |      |
| b. Selecting only cases for which Number of Employees = 1-50 |            |                             |            |                           |       |      |

**Source: Primary data, 2023**

The study revealed that firm size (1-50) employees has clear environmental policies in place. So environmental policies were noted to be significant (Beta=0.508,  $p < .05$ ). This may be attributed to the impact of their business activities on environment as well as pressure from enforcement agencies for compliance. However, it was noted that these firms did not priorities training on environmental issues train (Beta=0.156,  $p > .05$ ). Training was not significant. This could possibly be due to budget issues.

**Table 4-42 Descriptive Statistics of Firm Size**

| Descriptive Statistics <sup>a</sup>                            |        |                |    |
|--|--------|----------------|----|
|  | Mean   | Std. Deviation | N  |
| Compliance   | 3.0667 | .84572         | 36 |
| Policy   | 3.3403 | .75549         | 36 |
| Training   | 2.7315 | 1.26194        | 36 |
| a. Selecting only cases for which Number of Employees = 51-100 |        |                |    |

**Source: Primary data, 2023**

From table 4-42 above, the study looked at the firms which employed 50-100 employees to evaluate how they perform on environmental concerns of policies and training. The regression results were provided in the table 4-43 below.

**Table 4-43 Regression results for Firm Size and Compliance**

| Coefficients <sup>a,b</sup>                                    |            |                             |            |                           |       |      |
|--|------------|-----------------------------|------------|---------------------------|-------|------|
| Model  |            | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. |
|  |            | B                           | Std. Error | Beta                      |       |      |
| 1  | (Constant) | 2.035                       | .480       |                           | 4.236 | .000 |
|  | Policy     | -.098                       | .169       | -.087                     | -.577 | .568 |
|  | Training   | .497                        | .101       | .742                      | 4.908 | .000 |
| a. Dependent Variable: Comply_var                              |            |                             |            |                           |       |      |
| b. Selecting only cases for which Number of Employees = 51-100 |            |                             |            |                           |       |      |

**Source: Primary data, 2023**

The research indicated that companies that were employing 51-100 employees by size tend to focus more on training staff on environmental policies. The study showed that these companies had clear training programs and processes for their staff to sensitize them on environmental issues. Thus, training was noted to be significant at p=0.00.

**Table 4-44 Descriptive Statistics of Firm Size**

| Descriptive Statistics <sup>a</sup>                             |        |                |    |
|---|--------|----------------|----|
|   | Mean   | Std. Deviation | N  |
| Compliance  | 3.2885 | .78395         | 26 |
| Policy  | 3.3397 | .83423         | 26 |
| Training  | 2.8462 | 1.27273        | 26 |
| a. Selecting only cases for which Number of Employees = 101-150 |        |                |    |

**Source: Primary data, 2023**

The study further selected companies that had between 101-150 employees as shown in the table 4-44 above. However, in the study sample a total of 26 companies were in this group hence being short of the statistical number of  $N > 30$ . This was acceptable in some studies and regression results were provided in table 4-44 below.

The evolution of table 4-45 showed, firms that employ between 101-150 employees demonstrated not regard for environmental companies. These firms were mostly located in the central business area. The study variables on Environmental training and Environmental policy provisions were all insignificant.

**Table 4-45 Regression results for Firm Size and Compliance**

| Coefficients <sup>a,b</sup>                                     |            |                             |            |                           |       |      |
|---|------------|-----------------------------|------------|---------------------------|-------|------|
| Model   |            | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. |
|   |            | B                           | Std. Error | Beta                      |       |      |
| 1   | (Constant) | 1.444                       | .566       |                           | 2.552 | .018 |
|   | Policy     | .509                        | .249       | .542                      | 2.045 | .052 |
|   | Training   | .050                        | .163       | .082                      | .309  | .760 |
| a. Dependent Variable: Comply_var                               |            |                             |            |                           |       |      |
| b. Selecting only cases for which Number of Employees = 101-150 |            |                             |            |                           |       |      |

**Source: Primary data, 2023**

The large firms not showing any concern about the environmental could be attributed to their ability to corrupt environmental enforcement agencies. This has been observed a lot with most of these companies violating environmental regulations.

**Table 4-46 Descriptive Statistics of Firm Size**

| Descriptive Statistics <sup>a</sup>                              |        |                |    |
|--|--------|----------------|----|
|  | Mean   | Std. Deviation | N  |
| Compliance   | 4.0766 | .69898         | 37 |
| Policy   | 3.8316 | .62144         | 37 |
| Training   | 3.3333 | 1.03040        | 37 |
| a. Selecting only cases for which Number of Employees = Over 151 |        |                |    |

**Source: Primary data, 2023**

In attempt to verify the position that large firm have a complacency when it comes to environmental compliance, the study further regressed firms that employed more than 151 employees. A total of 37 firms were in this grouping N>30 making it an ideal sample statistically. The regression results are presented in table 4-47 below.

**Table 4-47 Regression results for Firm Size and Compliance**

| Coefficients <sup>a,b</sup>                                      |            |                             |            |                           |       |      |
|--|------------|-----------------------------|------------|---------------------------|-------|------|
| Model  |            | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. |
|  |            | B                           | Std. Error | Beta                      |       |      |
| 1  | (Constant) | 2.083                       | .645       |                           | 3.227 | .003 |
|  | Policy     | .382                        | .214       | .339                      | 1.783 | .084 |
|  | Training   | .159                        | .129       | .235                      | 1.236 | .225 |
| a. Dependent Variable: Comply_var                                |            |                             |            |                           |       |      |
| b. Selecting only cases for which Number of Employees = Over 151 |            |                             |            |                           |       |      |

**Source: Primary data, 2023**

The analysis of table 4-47 revealed that firms that employee more than 151 employee also do seem to care less about environmental issues. These firms seem to exhibit the same behaviors as their counterparts who employee 101-150 employees. They are characterized as large and mostly politically connected firms. The study noted that training and environmental policies were all not significant. This indicates that these firms will conduct themselves in any way they like regardless of environmental enforcement regulations. Institutional Corruption was also cited as a major concern as these firms are observed building factories and storage facilities in wetlands.

**4.2 Summary of Findings**

The research demonstrated that governance challenges in form of regulations and enforcements pose a risk on environmental compliance. These challenges were found to be institutional and multi-agency factors in enforcing compliance. In both the service and manufacturing firms,

location of the firm had an influence on whether a firm had a strong environmental policy in place. Duration in business also tended to inform how a firm responded to environmental challenges. Firms that had been in business longest tend to emphasize well develop environmental training program of the firm. However, industry size in terms of employees, large firms tend not to care about environment. These firm did not have environmental policies in place neither did they have good training programs. These firms were noted to have capacity to have these systems in place yet they are known to impact the environment more that the smaller firms. This might be attributed to corruption which they tend to exhibit given that they do not see any benefit for compliance.

#### **4.2 Conclusion**

To elicit compliance from firms, both community engagement and intergovernmental agency corporation should be enhanced to strengthen environmental regulations. All stakeholders at levels should be part of enforcement. So, there is need to strengthen the institutional frameworks that are weak.

Secondly, for voluntary compliance among firms, environmental targets and compliance benefits must be clearly communicated and implemented. This will enhance the level of self-evaluation by each firm on environmental compliance since the benefits to be derived can be measurable and attainable.

Thirdly, at firm level, the board of directors must adopt environment compliance policies and cascade them downwards through the organizational structures. These structures will then influence and engage communities to become proactive.

## **CHAPTER V: DISCUSSION**

### **5.1 Discussion of Results**

As firms' environmental impact comes under great scrutiny by regulatory and societal stakeholders, there is an increasing focus on the role corporate governance as tool plays in driving environmental initiatives. There is still a lack of comprehensive and systemic understanding of this emergent body of inquiry. Effectively, corporate governance Principles (accountability, Transparency and Fairness) should be aligned towards proactive environmentally friendly policies and behavior. The study revealed that institutional behavior of friendly policy and training were significantly dependent on the national institutional context. This was consistent with Aguilera and Jackson (2003) where institutions hold high importance to corporate governance to drive environmental compliance.



The research further indicated that while some firms by virtue of their location prioritized policy issues to training, the industry size and duration in business tend to signal that training is critical in these firms. This might be attributed to pressure from regulators like NEMA while enforcing environmental compliance. This is consistent with Aguilera-Caracuel et al., 2013; Berrone, Fosfuri, Gelabert & Gomez-Mejia, 2013) who state that social responsibility behavior of organizations is closely linked to the institutional pressure. Therefore, firms' tendency to be involved in environmental innovations and compliance are high when regulatory pressure from the institutions is high.

However, corporate governance principles of accountability, transparency, and fairness of NEMA is enforcing environmental regulations, the respondents had mixed feelings. They study indicated some firms that were positioned well economically were given preferential treatment compared to those that were small and had not political connections. This therefore tends to indicate that principles of Accountability, transparency and fairness were not being administered well hence hampering compliance Walls, Berrone & Phan, 2012; Ortiz-de-Mandojana et al., 2010). Eco-friendly corporate governance strategies must be geared towards the environment. While , various literature have supported this notion that corporate governance principles (Accountability, transparency and fairness) have positively influenced environmental related decisions (Dixon-Fowler, Ellstrand & Johnson, 2017; Berrone & Gómez-Mejía, 2009; Huang, Lobo & Zhoul, 2009), the study finds seem are in agreement.

## **5.2 Discussion of Research Question One (Qualitative)**

The study revealed that while corporate governance principles were being practices by NEMA, their effect in eliciting compliance was not being felt among the firms that pollute the environment. Several Key Respond Interviews and Focus Groous were held both at NEMA and the Industry.

### **5.2.1 The implementation of the CG principle on environmental disclosure**

The results of this study indicate that the implementation of the principle of CG would strengthen the influence environmental compliance among firms. According to Legitimacy theory that describes that the company should operate under norms and social values of the community to get legitimacy from the community Ashforth & Gibbs, 1990; Rupley et al., 2012) agree with the study finding. The research demonstrated that while policies and procedures are in

place, disclosure from firms is not forthcoming due to the lack of benefit that would be derived from disclosure either financially or media coverage. This is consistent with Hassan and Lahyani (2020) argue that disclosure delivered by companies to stakeholders enhances legitimacy and market share.

### 5.2.2 Incentives on environmental compliance

Furthermore, the research raised concerns over incentives. Most firms indicated that there were no incentives for compliance or noncompliance were in place, this is not consistent with Freeman, 1984 and Anas et al. (2015) who emphasizes the importance of environmental awards. Most firms in the interview indicated that there is little support from regulating agencies to help these firms comply. This has created opportunities for large firms to circumvent the regulations through financial means and be able to do harm to the environment. Therefore, this creates a gap between business firm and environmental agencies. This gap needs to be closed by both sides observing that they are partners rather than adversaries.

Other innovations were also raised such as carbon credits which would enhance voluntary disclosure among firms. Firms were more willing to have voluntarily disclose environmental compliance and noncompliance given that there is a financial or non-financial benefit to the firm. This finding is consistent with Nasir et al. (2014) and Lu and Abeysekera (2014)) who emphasize that the company's economic performance is a good incentive for compliance. The study finds that the environmentally sensitive firms in Uganda do not have a sufficient awareness of environmental compliance, even if it was only to meet the regulations. This study concludes the companies that actively carry out social and environmental compliance disclosures are private equity companies with little government connections.

### **5.3 Discussion of Research Question Two and Three**

The research questions two and three were quantitatively discussed. While NEMA has made efforts to implement the CG principles of Accountability, Fairness and Transparency, it has been found that most firms consider the support they receive to fall short of their expectations. Some firms have also mentioned that lack of fair playground between large firms and small firm's in as far as environmental compliance is concerned.

### **5.3.1 Comparing the Service and Manufacturing Firms**

In recent years, there has been a lot of awareness and discussion about environmental performance of firms in developing countries. Firms' decision regarding compliance can be explained in various ways. Some firms comply due to the fear of inspections and fines; others comply as they want to project an environmentally responsible image with their consumers and shareholders. The study divided service and manufacturing firms to analyze how each group is complying with the environment. The study revealed that there is a positive and significant correlation between policy and training ( $r=0.557$ ;  $r=0.553$ ) respectively for the two groups. This is consistent with Gangadharan, (2006).

### **5.3.2 Comparison the Service and Manufacturing by Location**

The study found that location was a critical player in compliance or noncompliance of firms. The study showed that firms that were in the areas near Kampala did not care about environment. Most of these firms were large with connections, economic and other influences. In comparison to their counterparts that were farther from the city in places like Mukono, these firms were mostly smaller in nature, and they showed great interest in conducting environmental training and some even had clear compliance policies in place.

### **5.3.3 Comparison the Service and Manufacturing by size**

The study revealed that firm size influenced whether governance principles and compliance behavior would be encouraged. Firm size was categorized in line with the number of employee the firm employed. Firm that were categorized as employing more than 51 employees did not have environmental policies integrated in their governance structures. These companies are the ones that were often seen as violating environmental regulations and most cases go unpunished. If there is going to be any success in enforcing the regulations, then there is need to drive the incentives through these large firms. These firms often also were seen to pollute and construct in major wetland that disrupts the eco system. The even or non-even enforcement of regulations between smaller firms and large firms drives the narrative among most small firms to engage more in environmental noncompliance.

### **5.3.4 Comparison the Service and Manufacturing by Duration in business**

The study also classified the firms by durations in business. The findings indicated that most of the firms that had been in existence for more than five years had good training programs in place. The training programs were also in collaboration with NEMA. These firms unlike their smaller

counterparts who have been in business for less than five year had clear environmental training structures that were mostly collaborated at Human resource level. However for compliance and reporting to take place, there is need to encourage these firms to integrate environmental matters in their governance structures.

## **CHAPTER VI:**

### **SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS**

#### **6.1 Summary**

The study explores the linkages between corporate governance principles (Accountability, Transparency and Fairness) and environmental compliance (voluntary or non-voluntary) by taking a case study of NEMA. The study observed that Uganda Government had clear environmental governance structures and policies in place through the environmental agencies like NEMA. However, there is low awareness of firms about these environmental regulations. The study tested two aspects at firm level and found that some firms had good training program for environmental compliance while and ignored having clear environmental policies that are anchored on the national environmental policies by NEMA or vice versa. The observation of compliance was divided among service and manufacturing firm. Further, the study subdivided

these by location, size and duration in business. Interestingly, smaller firms cared more to comply with regulations than the largest firms. The largest firms with better influences or connections showed less care for the environmental regulations. This might be due to their ability to exert undue influences to gain leniency and favors. The study further revealed that in order to enhance compliance, there is need for firms to view environmental compliance as an activity that can provide economic benefit.

## **6.2 Implications**

The study highlights the gaps existing between policy makers and firms that are required to comply with the set regulations. Most of the gaps exist in governance principles where firms perceive that the principles of Fairness, transparency and accountability are administered in variation depending on the firm size, location, and duration in business. As a result, these could lead to poor environment disclosure practices, destruction of wetland, high pollution, only to mention but a few. Once this happens, Uganda will not be able to build sustainable industries which will affect the next generation.

## **6.3 Recommendations for Future Research**

The study puts across the following recommendations for future research.

- i) Different scholars can look at the environmentally sustainable reporting and compliance among developing countries like Uganda
- ii) The renewable and sustainable energy migration among developing countries can also be explored. This is in line with being able to encourage firms to adopt environmental sustainability strategies.

## **6.4 Conclusion**

In conclusion of this study, the implementation of the principles of CG can strengthen and influence compliance. Furthermore, environmental award on disclosure could serve as incentives to encourage firms to voluntarily comply with the regulations. The consequence of this finding is that firm management is absolutely required to implement the principles of CG i.e. transparency, accountability, and fairness.

## APPENDIX A

### SURVEY COVER LETTER



## NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY (NEMA)

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NEMA House  
Plot 17, 19 & 21, Jinja Road  
P.O. Box 22255, Kampala, UGANDA  
Tel: 256-414-251064, 251065, 251068  
Fax: 256-414-257521  
Toll free: 0800-144-444  
E-mail: [info@nema.go.ug](mailto:info@nema.go.ug)  
Website: [www.nema.go.ug](http://www.nema.go.ug)  
Twitter @nemaug  
Facebook @NemaUG

**NEMA/1.6**

10<sup>th</sup> May, 2023

Mr. Alfred Okot-Okidi  
**KAMPALA.**

## **APPENDIX B**

### **INFORMED CONSENT**

{ Sample Text Sample Text Sample Text Sample Text Sample Text Sample Text Sample Text }

## **APPENDIX C i**

### **INTERVIEW GUIDE**

SWISS SCHOOL OF BUSINESS AND MANAGEMNET

CORPORATE GOVERNANCE AND PROMOTION OF ENVIRONMNETAL COMPLIANCE  
IN UGANDA; A CASE OF NEMA

INTERVIEW PROTOCOLE 1-BOARD OF DIRECTORS

Preamble

Corporate governance is central to achieving environmental compliance. The study is trying to measure the extent to which corporate governance principles are applied in environmental compliance practices at NEMA

The data collected will be help in confidence and will be used solely for academic purposes.

Bio Data

Genda: Male

Female

Position .....

Length of service .....

#### Interview Questions

1. What major constraints does NEMA face in its operations?
2. Is the legal framework sufficient to enable NEMA carry out its operations?
3. Is funding a constraint to the operations of NEMA?
4. How does NEMA relate with other law enforcement agencies?
5. What is your view of attitude of society towards environment?
6. Despite the existence of NEMA environmental de gradation has continued, what should be done?

Thank you

## **APPENDIX C II**

### **INTERVIEW GUIDE**

SWISS SCHOOL OF BUSINESS AND MANAGEMNET

CORPORATE GOVERNANCE AND PROMOTION OF ENVIRONMNETAL COMPLIANCE  
IN UGANDA; A CASE OF NEMA

INTERVIEW PROTOCOLE 2-MANAGEMENT

#### Preamble

Corporate governance is central to achieving environmental compliance. The study is trying to measure the extent to which corporate governance principles are applied in environmental compliance practices at NEMA

The data collected will be help in confidence and will be used solely for academic purposes.

Bio Data



Genda: Male                      Female

Position .....

Length of service .....

#### Interview Questions

1. To what extent have Corporate Governance Principles been applied in NEMA?
2. Do you train staff in the operationalization of these principles?
3. Are the principle useful in the control and management of this organization?
4. Are these principles useful in the bid to elicit compliance?

Thank you

## **APPENDIX D**

### **Questionnaire**

#### QUESTIONNAIRE - INDUSRTY

#### NATIONAL ENVIRONMNET MANAGEMNET AUTHORITY (NEMA) SURVEY

##### Preamble

This study seeks to know the extent to which corporate governance influences environmental sustainability. Please answer all questions. Thank you very much for your indulgence.

Section 1 (Tick one as applicable to you).

a) Your sex: Male/Female    b) Age: i) < 25    ii) 26-34    iii) 35-45    iv) 46-50    vi) 51-60    vii) >61

c)Position: 1) Manager            2) Middle Manager            3) Senior Lecturer

d) Length of service in years: i) <5      ii) 5-10      iii) 11-16      iv) > 17

f) Marital status      i) Married      ii) Single      iii) Divorced      iv) Other

Section 2: To what extent does your organization actually Comply with environmental regulations

**Scale: 1. Strongly Disagree (SD) 2. Disagree (D) 3. Neutral (N) 4. Agree (A) 5. Strongly Agree (SA)**

| Code                                 | Statement   | 1 | 2 | 3 | 4 | 5 |
|--------------------------------------|---|---|---|---|---|---|
| Enforcement History                  |   |   |   |   |   |   |
| CEH1                                 | Is the organization operating in a highly regulated industry?   | 1 | 2 | 3 | 4 | 5 |
| CEH2                                 | Does the organization hold any environmental operating permits?   | 1 | 2 | 3 | 4 | 5 |
| CEH3                                 | Is there a history of agency inspections?   | 1 | 2 | 3 | 4 | 5 |
| CEH4                                 | is there a history of regulatory violations or civil enforcement action   | 1 | 2 | 3 | 4 | 5 |
| CEH5                                 | Is there a history of criminal violations or enforcement actions  | 1 | 2 | 3 | 4 | 5 |
| CEH6                                 | Did past violations results in consent decrees or settlement agreements with any enforcement agency                   | 1 | 2 | 3 | 4 | 5 |
| CEH7                                 | Have other companies In your industry been investigated or indicted   | 1 | 2 | 3 | 4 | 5 |
| CEH8                                 | Does your organization perform a root course analysis to determine the course of each violation or enforcement action | 1 | 2 | 3 | 4 | 5 |
| Effectiveness of Compliance programs |   |   |   |   |   |   |

|       |  |   |   |   |   |   |
|-------|--|---|---|---|---|---|
| CEP9  | Does the organization have a written environmental compliance program or policy  | 1 | 2 | 3 | 4 | 5 |
| CEP10 | Does the environmental compliance policy include written instructions to employees on how to handle environmental requests, visits from regulators, visits from enforcement agencies | 1 | 2 | 3 | 4 | 5 |
| CEP11 | Is the environment compliance policy adequately resourced  | 1 | 2 | 3 | 4 | 5 |
| CEP12 | Does the environmental compliance program have a stated purpose  | 1 | 2 | 3 | 4 | 5 |
| CEP13 | Does the environmental compliance program have executive or board level representation   | 1 | 2 | 3 | 4 | 5 |
| CEP14 | Does the Board of directors receive reports on environmental compliance on a regular basis   | 1 | 2 | 3 | 4 | 5 |
| CEP15 | Is there a specific individual identified as being responsible for the organization's environmental compliance program   | 1 | 2 | 3 | 4 | 5 |
| CEP16 | Does the environmental compliance program have independence from the organizations management  | 1 | 2 | 3 | 4 | 5 |
| CEP17 | Is there a mechanism to escalate issues directly to the Board of directors in the event management is not responsive   | 1 | 2 | 3 | 4 | 5 |
| CEP18 | Does the organization have a help line or other reposting mechanism in place for anonymous reporting of environmental compliance concerns  | 1 | 2 | 3 | 4 | 5 |
| CEP19 | Does the organization keep a record of all reports of potential environmental compliance issues  | 1 | 2 | 3 | 4 | 5 |
| CEP20 | Does the organization keep a record of all disciplinary actions taken as results of environmental compliance issues  | 1 | 2 | 3 | 4 | 5 |
| CEP21 | Does the organization have a retaliation prevention policy in place to protect those who report potential environmental compliance issues  | 1 | 2 | 3 | 4 | 5 |
| CEP22 | Is environment compliance considered a factor in employee performance and bonus measures   | 1 | 2 | 3 | 4 | 5 |
| CEP23 | Has environmental compliance program been in place for more than 3 years   | 1 | 2 | 3 | 4 | 5 |
| CEP24 | Has environmental compliance program been revised, amended or updated  | 1 | 2 | 3 | 4 | 5 |
| CEP25 | Do you keep an archive of all past versions of the environmental compliance program  | 1 | 2 | 3 | 4 | 5 |
| CEP26 | Has environmental compliance program been reviewed or assessed by an outside subject matter expert for effectiveness   | 1 | 2 | 3 | 4 | 5 |
| CEP27 | Has the Organization conducted any benchmarking or self-assessment   | 1 | 2 | 3 | 4 | 5 |

|                                 |  |   |   |   |   |   |
|---------------------------------|--|---|---|---|---|---|
|                                 | activities to compare its environment compliance program to best practices   |   |   |   |   |   |
| Training and Communication      |  |   |   |   |   |   |
| CTC28                           | Is environmental compliance program including relevant policies and procedures, easily accessible to all employees   | 1 | 2 | 3 | 4 | 5 |
| CTC29                           | Are all employees trained on a regular basis on environmental compliance topics  | 1 | 2 | 3 | 4 | 5 |
| CTC30                           | Do those within your organization with responsibility for environmental compliance regularly attend external seminars and educational programs to ensure they are subject matter experts | 1 | 2 | 3 | 4 | 5 |
| Trust In Environmental Agencies |  |   |   |   |   |   |
| TRU31                           | To what extent do you agree or disagree with the following statement about environmental agencies  | 1 | 2 | 3 | 4 | 5 |
| TRU32                           | I trust environmental agencies like NEMA, Police, courts to do their jobs  | 1 | 2 | 3 | 4 | 5 |
| TRU33                           | These agencies Provide a reliable service on environment   | 1 | 2 | 3 | 4 | 5 |
| TRU34                           | They Act in the interests of the environment   | 1 | 2 | 3 | 4 | 5 |
| TRU35                           | They Inform public about important environmental issues in their area  | 1 | 2 | 3 | 4 | 5 |
| TRU36                           | Based on your overall impression of <b>environment agencies</b> , which of the following words would you use to describe them?   | 1 | 2 | 3 | 4 | 5 |
| TRU37                           | They act in the interest of the public   | 1 | 2 | 3 | 4 | 5 |
| TRU38                           | They acts are ambitious as far as <b>the environment is concerned</b>  | 1 | 2 | 3 | 4 | 5 |
| TRU39                           | They are environmentally conscious   | 1 | 2 | 3 | 4 | 5 |
| TRU40                           | They competent   | 1 | 2 | 3 | 4 | 5 |
| TRU41                           | They are transparent on environmental issues   | 1 | 2 | 3 | 4 | 5 |
| TRU42                           | They are trust worthy  | 1 | 2 | 3 | 4 | 5 |

Source: Adopted and Modified from Seok-Beom Choi, e tal (2017)

## References

- Abu-Tapanjeh, A.M., 2009. Corporate Governance from the Islamic Perspective: A Comparative Analysis with OECD Principles.
- Arrow, K., 1971. Essays in the theory of risk bearing. Markham, Chicago.
- Assembe-Mvondo, S., 2013. Local communities' and indigenous peoples' rights to forests in Central Africa: From hope to challenges. *Africa Spectrum*, 48(1), pp.25-47.
- Bansal, P., 2003. From issues to actions: The importance of individual concerns and organizational values in responding to natural environmental issues. *Organization Science*, 14(5), pp.510-528. doi: 10.1287/orsc.14.5.510.16765.
- Banzhaf, H.S. and Walsh, R.P., 2006. Do people vote with their feet? An empirical test of environmental gentrification. RFF Discuss. Paper No. 06-10.
- Basu, A., Lal, R., Srinivasan, V. and Staelin, R., 1985. Sales force compensation plans: An agency theoretic perspective. *Marketing Science*, 4, pp.267-291.
- Blaser, J., 2010. Forest law compliance and governance in tropical countries: A region-by-region assessment of the status of forest law compliance and governance in the tropics, and recommendations for improvement. Italy.

- Jeong, B.G., 2013. Accountability in South Korea Non-Profit Organizations stake holder expectations as perceived by Non-profit leaders. Kean University.
- Bullard, R.D., 1999. Dismantling environmental racism in the USA. *Local Environment*, 4(1), pp.5-19.
- Cent, J., Grodzińska-Jurczak, M. and Pietrzyk-Kaszyńska, A., 2014. Emerging multilevel environmental governance—A case of public participation in Poland. *J. Nat. Conserv*, 22, pp.93-102.
- Chen, C.X. and Han, L., 2018. Public Participation in water environment control: The status and experience of Shenzhen, Southern China. *Meteorol. Environ. Res*, 9, pp.70-79.
- Crossan, M.M., Lane, H.W. and White, R.E., 1999. An Organizational Learning Framework: From Intuition to Institution. *The Academy of Management Review*, 24(3), pp.522-537.
- Guobadia, D.A., 2001. The Rules of Good Corporate Governance and the Methods of Efficient Implementation: A Nigerian Perspective.
- Demski, J., 1980. A simple case of indeterminate financial reporting. Working paper, Stanford University.
- Donaldson, T. and Preston, L.E., 1995. The stakeholder theory and the corporation: Concepts, evidence and implications. *Academy of Management Review*, 20(1), pp.65-91.
- Ostrom, E., 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge: CUP.
- Eaton, S. and Kostka, G., 2018. What makes for good and bad neighbours? An emerging research agenda in the study of Chinese environmental politics. *Environmental Politics*. doi:10.1080/09644016.2018.1452344.
- European Commission, 2003a. Forest Law Enforcement, Governance and Trade (FLEGT) Proposal for an action plan. Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52003DC0251&from=EN>.
- Economy, E. and Lieberthal, K., 2007. Scorched earth: will environmental risks in China overwhelm its opportunities? *Harvard Business Review*, 4(6), pp.88-96.

- Eisenhardt, K.M., 1985. Control: Organizational and economic approaches. *Management Science*, 31, pp.134-149.
- Eisenhardt, K.M., 1989. Agency theory: an assessment and review. *Academy of Management Review*, 14(1), pp.57-74.
- Erich, K., Apolonia, N. and Alexander, W., 2006. Shared subjective views, intent cooperate and tax compliance: Similarities between Australian taxpayer and tax officers. *Journal of Economic Psychology*, 26, pp.502-517.
- Lund-Thomsen, P., 2005. Corporate accountability in South Africa: the role of community mobilizing in environmental governance. *International Affairs*, 81(3), pp.619-633. doi: 10.1111/j.1468-2346.2005.00472.
- Fama, E., 1980. Agency problems and the theory of the firm. *Journal of Political Economy*, 88, pp.288-307.
- Fontrudona, J. and Sison, A.J.G., 2006. The Nature of the Firm, Agency Theory and Shareholder Theory: A Critique from Philosophical Anthropology. *Journal of Business Ethics*, 66, pp.33-42.
- Fraser, N., 2009. *Scales of justice: Reimagining political space in a globalizing world*. New York: Columbia University Press.
- Freeman, R.E., 1994. The politics of stakeholder theory: Some future directions. *Business Ethics Quarterly*, 4(4), pp.409-421.
- Freeman, R.E., 2005. The development of stakeholder theory: An idiosyncratic approach. In: Smith, K.G. and Hitt, M.A. (eds.), *Great minds in management: The process of theory development*. Oxford, UK: Oxford University Press, pp.417-435.
- Freeman, R.E., Harrison, J.S. and Wicks, A.C., 2007. *Managing for stakeholders: Survival, reputation, and success*. New Haven, CT: Yale University Press.
- Freeman, R., Dodd, R. and Pierce, J., 2000. *Environmentalism and the new logic of business*. Oxford, UK: Oxford University Press.
- Garmendia, E. and Stagl, S., 2010. Public participation for sustainability and social learning: Concepts and lessons from three case studies in Europe. *Ecol. Econ*, 69, pp.1712-1722.

- Gibbon, P. and Ponte, S., 2008. Global value chains: From governance to governmentality? *Economy and Society*, 37(3), pp.365-92. doi: 10.1080/03085140802172680.
- Goodland, R., 1995. The concept of environmental sustainability. *Annual review of ecology and systematics*, 26(1), pp.1-24.
- Guobadia, D.A., 2001. *The Rules of Good Corporate Governance and the Methods of Efficient Implementation: A Nigerian Perspective*.
- Gangadharan, L., 2006. Environmental compliance by firms in the manufacturing sector in Mexico. *Ecological Economics*, 59(4), pp.477-486.
- Hajjar, R., 2015. Advancing small-scale forestry under FLEGT and REDD in Ghana. *Forest Policy and Economics*, 58, pp.12-20. doi: 10.1016/j.forpol.2014.09.014.
- Halverson, K., 2004. China's WTO accession: economic, legal, and political implications. *Boston College International and Comparative Law Review*, 27(2), pp.319-370.
- Hinings, C.R. and Greenwood, R., 2003. Disconnects and consequences in organization theory. *Administrative Science Quarterly*, 47, pp.411-422.
- Hirschman, A.O., 1970. *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States*. Cambridge, MA, USA: Harvard
- Ho, C.K., 2005. Corporate governance and corporate competitiveness: an international analysis. *Corporate Governance: An International Review*, 13(2), pp.211-253.
- Hogl, K., Kvarda, E., Nordbeck, R. and Pregernig, M., 2012. *Environmental Governance: The Challenge of Legitimacy and Effectiveness*. Cheltenham, UK: Edward Elgar Publishing.
- Huang, Z., 2017. NGOs are under threat in China's latest crackdown against "foreign forces". Available at: <https://qz.com/873489/ngos-are-trying-to-stay-alive-in-chinas-latest-crackdown-against-foreign-forces/> [Accessed 28 April 2018].
- Compliance Cosmos, n.d. *Environmental Compliance Program Self-Assessment Questionnaire*. Available at: <https://compliancecosmos.org/environmental-compliance-program-self-assessment-questionnaire> [Accessed date needed].



- Innes, J.E. and Booher, D.E., 2004. Reframing public participation: Strategies for the 21st century. *Planning Theory & Practice*, 5, pp.419–436.
- Ismail, S., 2021. Environmental management in Uganda: A reflection on the role of NEMA and its effectiveness in implementing Environment Impact Assessment (EIA) of the Greater Kampala Metropolitan Area (GKMA).
- Ismail, S., 2020. Environmental Management in Uganda: A Reflection on the Role of NEMA and Its Effectiveness in Implementing Environment Impact Assessment (EIA) of the Greater Kampala Metropolitan Area (GKMA). *Journal of Advanced Research in Social Sciences and Humanities*, 5(1), pp.1-13.
- Jahiel, A., 1997. The contradictory impact of reform on environmental protection in China. *China Quarterly*, 149, pp.81–103.
- Jensen, M.C., 2002. Value maximization, stakeholder theory and the corporate objective function. *Business Ethics Quarterly*, 12(2), pp.235-256.
- Jensen, M. and Meckling, W., 1976. Theory of the firm: managerial behaviour, agency costs, and ownership structure. *Journal of Financial Economics*, 3, pp.305–360.
- Jolibert, C. and Wesselink, A., 2012. Research impacts and impacts on research in biodiversity conservation: The influence of stakeholder engagement. *Environmental Science & Policy*, 22, pp.100–111.
- Jones, T.M., 1995. Instrumental stakeholder theory: A synthesis of ethics and economics. *Academy of Management Review*, 20(2), pp.404-437.
- Kaler, J., 2003. Differentiating stakeholder theories. *Journal of Business Ethics*, 46, pp.71-83.
- Kaler, J., 2006. Evaluating stakeholder theory. *Journal of Business Ethics*, 69, pp.249-268.
- Kanu, E.J., Tyonum, E.T. and Uchegbu, S.N., 2018. Public participation in environmental impact Assessment (EIA): A critical analysis. *Architectural Engineering*, 3(1).
- Kogut, B., 2013. *The Small Worlds of Corporate Governance*, Vol. 1. Cambridge, MA: MIT Press.

- Kosnik, R., 1987. Greenmail: A study in board performance in corporate governance. *Administrative Science Quarterly*, 32, pp.163–185.
- Krippendorff, K., 2004. *Content analysis: An introduction to its methodology*. Thousand Oaks, CA: Sage.
- Kulik, B.W., 2005. Agency Theory, Reasoning and Culture at Enron: In search of a Solution. *Journal of Business Ethics*, 59, pp.347–360.
- Ladner, K.L., 2009. Colonialism isn't the only obstacle: Indigenous peoples and multilevel governance in Canada. In A.
- Larson, A.M. and Ribot, J.C., 2007. The poverty of forestry policy: Double standards on an uneven playing field. *Sustainability Science*, 2 (2), pp.189–204. doi: 10.1007/s11625-007-0030-0.
- Lesniewska, F. and McDermott, C.L., 2014. FLEGT VPAs: Laying a pathway to sustainability via legality lessons from Ghana and Indonesia. *Forest Policy and Economics*, 48, pp.16–23. doi: 10.1016/j.forpol.2014.01.005.
- Levin, K., Cashore, B., Bernstein, S. and Auld, G., 2012. Overcoming the tragedy of super wicked problems: Constraining our future selves to ameliorate global climate change. *Policy Sciences*, 45 (2), pp.123–52. doi: 10.1007/s11077-012-9151-0.
- Ma, X. and Ortolano, L., 2000. *Environmental Regulation in China: Institutions, Enforcement and Compliance*. Lanham: Rowman & Littlefield Publishers, Inc.
- Masud, M.A.K., Nurunnabi, M. and Bae, S.M., 2018. The effects of corporate governance on environmental sustainability reporting: Empirical evidence from South Asian countries. *Asian Journal of Sustainability and Social Responsibility*, 3, pp.1-26.
- McGrath, J., Martin, J. and Kukla, R., 1982. *Judgment calls in research*. Beverly Hills, CA: Sage.
- Mitnick, B., 1986. *The theory of agency and organizational analysis*. University of Pittsburgh.
- Mol, A.P. and Carter, N.T., 2006. China's environmental governance in transition. *Environmental Politics*, 15 (2), pp.149–170. doi:10.80/09644010600562765.

- Morgan, D.L., 2007. Paradigms lost and pragmatism regained: Methodological implications of combining qualitative and quantitative methods. *Journal of Mixed Methods Research*, 1(1), pp.48-76.
- Mugenda, O.M. and Mugenda, A., 2003. *Research Methods in Education*.
- Muro, M. and Jeffrey, P., 2012. Time to talk? How the structure of dialog processes shapes stakeholder learning in participatory water resources management. *Ecology and Society*, 17.
- Myers, R., Intarini, D., Sirait, M.T. and Maryudi, A., 2017. Claiming the forest: Inclusions and exclusions under Indonesia's 'new' forest policies on customary forests. *Land Use Policy*, 66, pp.205–13. doi: 10.1016/j.landusepol.2017.04.039.
- Newig, J. and Fritsch, O., 2009. Environmental governance: Participatory, multi-level-and effective? *Environmental Policy and Governance*, 19, pp.197–214.
- Nonaka, I. and Takeuchi, H., 1995. *The Knowledge Creating Company: How Japanese Companies Create the Dynamics of Innovation*. New York: Oxford University Press.
- Odiya, J.P., 2009. Availability and use of instructional materials in the teaching of A-Level Biology in Lira District.
- Okereke, C. and Dooley, K., 2010. Principles of justice in proposals and policy approaches to avoided deforestation: Towards a post-Kyoto climate agreement. *Global Environmental Change*, 20 (1), pp.82–95. doi: 10.1016/j.gloenvcha.2009.08.004.
- Ortiz-de-Mandojana, N., Aguilera-Caracuel, J. and Aragón-Correa, J., 2010. The adjustment of the corporate governance structures to global sustainability. In *Global Sustainability as a Business Imperative*, James AF Stoner, Wankel C (eds). New York: Palgrave Macmillan, pp.127–146.
- Ortiz-de-Mandojana, N., Aguilera-Caracuel, J. and Morales-Raya, M., 2016. Corporate governance and environmental sustainability: The moderating role of the national institutional context. *Corporate Social Responsibility and Environmental Management*, 23(3), pp.150-164.
- Pfeffer, J., 1993. Barriers to the advance of organizational science: Paradigm development as a dependent variable. *Academy of Management Review*, 18(4), pp.599-620.

- Quick, K.S. and Bryson, J.M., 2016. *Public Participation: Handbook on Theories of Governance*. Cheltenham, UK: Edward Elgar Publishing.
- Mahon, R. and McBride, S., 2008. 'Introduction', in *The OECD and Transnational Governance*. Vancouver: UBC Press, pp.3-14.
- Rooij, B., 2006. *Regulating Land and Pollution in China: Lawmaking, Compliance and Enforcement*. Leiden: Leiden University.
- Ross, S., 1973. The economic theory of agency: The principal's problem. *American Economic Review*, 63, pp.13–139.
- Choi, S.B., Min, H., Joo, H.Y. & Choi, H.B., 2017. Assessing the impact of green supply chain practices on firm performance in the Korean manufacturing industry. *International Journal of Logistics Research and Applications*, 20(2), pp.129-145.
- Schlosberg, D., 2007. *Defining environmental justice: Theories, movements, and nature*. Oxford: Oxford University Press.
- Schroeder, H., 2010. Agency in international climate negotiations: The case of indigenous peoples and avoided deforestation. *International Environmental Agreements: Politics, Law and Economics*, 10(4), pp.317–32. doi: 10.1007/s10784-010-9138-2.
- Seligsohn, D., Liu, M. and Zhang, B., 2018. The Sound of one hand clapping: transparency without accountability. *Environmental Politics*. doi:10.1080/09644016.2018.1452522.
- Shapiro, C. and Varian, H.R., 1999. *Information Rules: A Strategic Guide to the Network Economy*. Boston, MA: Harvard Business School Press.
- Shapiro, S.P., 2005. Agency Theory. *Annual Review of Sociology*, 31, pp.263–284.
- Siems, M. and Alvarez-Macotela, O.S., 2015. *The G20/OECD principles of corporate governance 2015: a critical assessment of their operation and impact*.
- Sikor, T., Martin, A., Fisher, J. and He, J., 2014. Toward an empirical analysis of justice in ecosystem governance. *Conservation Letters*, 7(6), pp.524–32. doi: 10.1111/conl.12142.
- Sikor, T., 2013. *The justices and injustices of ecosystem services*. London: Earthscan.

- Sinkule, B.J. and Ortolano, L., 1995. *Implementing Environmental Policy in China*. Westport: Praeger.
- Spence, A.M. and Zeckhauser, R., 1971. Insurance, information, and individual action. *American Economic Review*, 61, pp.380–387.
- Stern, R.N. and Barley, S.R., 1995. Organizations and social systems: Organization theory's neglected mandate. *Administrative Science Quarterly*, 41(1), pp.146-162.
- Tang, S., Lo, C.W., Cheung, K. and Lo, J.M., 1997. Institutional constraints on environmental management in urban China: environmental impact assessment in Guangzhou and Shanghai. *China Quarterly*, 152, pp.863–874.
- Taylor, D.E., 2000. The rise of the environmental justice paradigm: Injustice framing and the social construction of environmental discourses. *American Behavioral Scientist*, 43, pp.508–580.
- The Republic of Uganda, 2019. *National Environment Act*.
- The Republic of Uganda, 1995. *The National Environment Act*.
- The Republic of Uganda, 2018-2019. *The National State of the Environment Report*.
- Tiebout, C.M., 1956. A pure theory of local expenditures. *Journal of Political Economy*, 64, pp.416–424.
- Tricker, B., 2009. *Corporate Governance: Principles, Policies and Practices*. New York: Oxford University Press.
- Van Rooij, B., Stern, R. and Fürst, K., 2016. The Authoritarian logic of regulatory pluralism: understanding China's new environmental actors. *Regulation & Governance*, 10(1), pp.3–13.
- Vogel, D., 2010. The private regulation of global corporate conduct: Achievements and limitations. *Business and Society*, 49(1), pp.68–87. doi: 10.1177/2F0007650309343407.
- Walker, G., 2012. *Environmental justice: Concepts, evidence and politics*. London: Routledge.
- Wang, Q., 2018. Shanghaishi huanbao dashuj jianshe shijian yu tansuo [Practice and Exploration of Environment Protection Big Data Construction in Shanghai]. *Shanghai Jieneng [Shanghai Energy Conservation]*, 9, pp.513–517.

- Weber, R.P., 1990. *Basic content analysis*. Thousand Oaks, CA: Sage.
- Weick, K.E., 1999. That's moving theories that matter. *Journal of Management Inquiry*, 8, pp.134-142.
- Wenger, E., 1998. *Communities of Practice*. Cambridge: Cambridge University Press.
- White, H., 1985. Agency as control. In J. Pratt and R. Zeckhauser (Eds.), *Principles and agents: The structure of business*. Boston: Harvard Business School Press, pp.187-214.
- Wiersum, K.F. and Elands, B., 2013. Opinions on legality principles considered in the FLEGT/VPA policy in Ghana and Indonesia. *Forest Policy and Economics*, 32, pp.14–22. doi:10.1016/j.forpol.2012.08.004.
- Wilson, R., 1968. On the theory of syndicates. *Econometrica*, 36, pp.119–132.
- Wunderlich, M., 2017. Structure and law enforcement of environmental police in China. *Cambridge Journal of China Studies*, 12(4), pp.33–49. doi:10.17863/CAM.21535.
- Fairness Foundation [www.fairnessfoundation.com/fairnesssurvey/morecommon's](http://www.fairnessfoundation.com/fairnesssurvey/morecommon's), 2020. Britain's choice.
- Xinhua Net, 2018. China starts collecting environment tax. Available from: [http://www.xinhuanet.com/english/2018-01/01/c\\_136865174.htm](http://www.xinhuanet.com/english/2018-01/01/c_136865174.htm) [Accessed 23 April 2018].
- Zhao, F., Zhang, Y., Alharthi, M. and Zafar, M.W., 2022. Environmental sustainability in developing countries: Understanding the criticality of financial inclusion and globalization. *Sustainable Development*, 30(6), pp.1823-1837.
- Zhen, N., Barnett, J. and Webber, M., 2018. The Dynamics of Trust in the Shanghai Water Supply Regime. *Environmental Management*, 61, pp.224–235. doi:10.1007/s00267-017-0974-5.