

UNIVERSITY OF GHANA



**QUALITY OF REGULATORY GOVERNANCE IN GHANA: AN ANALYSIS OF
THE PUBLIC UTILITIES REGULATORY COMMISSION IN THE ELECTRICITY
AND URBAN WATER SECTORS**

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**THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF GHANA,
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AWARD OF DOCTOR OF PHILOSOPHY IN PUBLIC ADMINISTRATION AND
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DECLARATION

I declare that this dissertation is a result of my original research and has not been presented by anyone for any academic award at this university or any other university. All references used in this work have been duly acknowledged.



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CERTIFICATION

We, the undersigned, certify that this dissertation was supervised according to the procedures laid down by the University.



06/09/2024

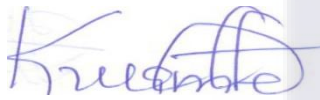
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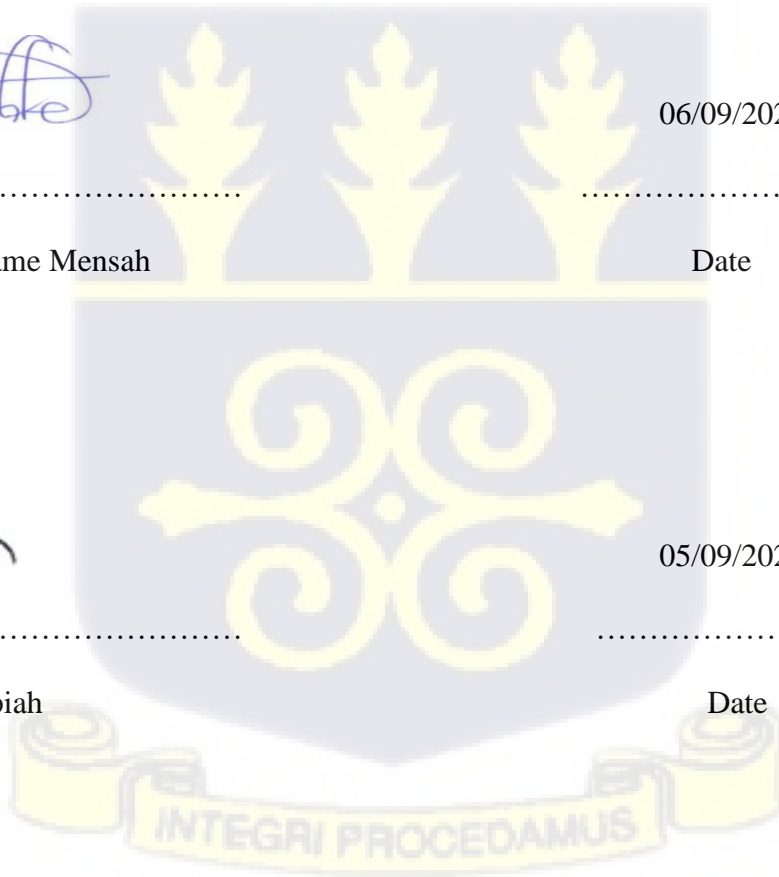
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DEDICATION

I dedicate this Dissertation to my late father (RT Abdulai) and brother (Abdulai Karim). My special dedication goes to my lovely mother, Hajia Zenabu Abdulai; my daughter, Mankunamsi Barichisu Abdulai; my sons, Suguruveila Dayan Abdulai, Ayman Wunpini Abdulai and my wife, Fauzia Imoro, for their prayers, support, and understanding.

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ABBREVIATIONS/ACRONYMS

AFDB- African Development Bank

CWM- Cash Waterfall Mechanism

EC - Energy Commission

PURC - Public Utilities Regulatory Commission

MOE- Ministry of Education

MOE- Ministry of Energy

MOF- Ministry of Finance

MOH- Ministry of Health

MSW- Ministry of Sanitation and Water Resources

GRIDCO- Ghana Grid Company

GWCL- Ghana Water Company Limited

ECG – Electricity Company of Ghana

NEDCO- Northern Electricity Distribution Company

IMF- International Monetary Fund

IRAs - Independent Regulatory Agencies

CWSA- Community Water and Sanitation Agency

WRC- Water Resources Commission

WB - World Bank

EC – Energy Commission

CSO- Civil Society Organization



ABSTRACT

This thesis undertook a rigorous analysis of the quality of regulatory governance within the Public Utilities Regulatory Commission (PURC), specifically focusing on its oversight of Ghana's electricity and urban water sectors. The overarching objective of the study was to conduct a comprehensive qualitative investigation into the regulatory governance of the Public Utilities Regulatory Commission (PURC) in Ghana, assessing the alignment of its institutional design and legal framework with recognised features, specifically Autonomy and Transparency of effective regulatory governance, assessing its responsiveness to stakeholders in the electricity and urban water sectors, and analysing the perceived level of regulatory credibility provided to stakeholders.

Data was collected from various stakeholders through one-on-one interviews, focus group discussions, and documentation using a qualitative research approach. The study was carried out across three geographically representative regions: Accra in the Southern belt, Kumasi in the Middle belt, and Tamale in the Northern belt. The data was analysed using qualitative thematic analysis, which involved a thematic analysis of the interview and focus group discussion transcripts.

The research findings reveal that PURC exhibits commendable managerial, legal, and financial autonomy. However, it grapples with challenges related to structural autonomy, rendering it susceptible to political interference. The study also reveals that while mechanisms are in place to enhance transparency, there is still room for improvement. Particularly, there is limited transparency in the tariff calculation model due to the unpredictability of the variables used. Furthermore, although PURC has demonstrated a noteworthy degree of regulatory responsiveness and credibility for its stakeholders, certain inconsistencies in policies and decisions need attention. Precisely, PURC has not been able to ensure the predictability of tariff

adjustment schedules. The challenges encountered encompass political interference, insufficient safeguard mechanisms, threats to financial autonomy, the influence of environmental factors, and inadequate institutional resources within the country. The study makes significant original contributions to knowledge including institutional and legal frameworks in the context of regulatory autonomy and transparency, responsiveness, and credibility. By delving into regulatory governance in Ghana, the study also finds support for three theories of regulation: public interest, capture theory, and credible commitment.

Based on the research findings, several recommendations are proposed to enhance the regulatory institutional design and legislation. These include reinforcing autonomy, transparency, and responsiveness in the appointment procedures and tenure of office, as well as implementing a transparent Cash Waterfall Mechanism and enforcement strategies.

Furthermore, this study highlights the importance of a national dialogue concerning the intricate interplay of socio-politico-technological factors and the tariff-setting process. It emphasises the necessity of balancing safeguarding consumer interests and ensuring that utility service providers receive fair tariffs to facilitate infrastructure investment.

Future research endeavours could focus on measuring the quality of PURC's regulatory governance, emphasising the equitable management of stakeholders' interests, and further advancing the regulatory landscape in Ghana's utility sectors. Additionally, there is a critical need to explore the reasons behind political interference to ascertain whether they are rooted in public or private interests. Moreover, further research could explore the factors leading to regulatory non-compliance by public utilities in the electricity and urban water sectors. Specifically, to ascertain the nature of power-play within the governance structure in the electricity and water sectors.

Additionally, the study suggests delving deeper into the motivations behind government interference and utility non-compliance by utilising theories such as public interest and regulatory capture. It also highlights the implementation of transparency measures like the Cash Waterfall Mechanism (CWM). It proposes comparative analyses and longitudinal studies to track the impact of regulatory reforms and stakeholder engagement. Furthermore, the study emphasises the need for comprehensive investigations into regulatory credibility's effects on stakeholder behaviour and regulatory outcomes, advocating for continued exploration of regulatory dynamics across different sectors and jurisdictions.



CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter presents the general introduction to this dissertation, which emphasises the rationale for carrying out the research. It gives a brief background to the study by providing the contextual basis for the research and a short historical trajectory that necessitated some changes that resulted in this research. It also presents the objectives for the study, the research problems addressed, and the questions the study sought to answer, which collectively form the study's significant conclusions in chapter nine. The study's scope is extensive, covering the multifaceted aspects of regulatory governance and its impact on achieving regulatory agency goals, rooting out bribery and corruption, and correcting market and government failures. Additionally, the chapter presents the significance of the study and concludes its limitations.

1.2 Research background

Following the spread of regulatory reforms as well as the proliferation of regulatory agencies across the globe (Jordana et al., 2018; Levi-Faur et al., 2021), regulatory governance has become an essential object of research across the social sciences, particularly in public administration, political science, and economics (Guidi et al., 2020; Gilardi, 2008; Kraus, 2009). Regulation is defined broadly as the institutions, processes, and instruments put in place to steer the behaviour of individuals and collectives toward desirable societal ends (Van der Heijden, 2020). Researchers divide regulation into regulatory governance (how regulators go about their work, in other words, 'the rules of the game') and regulatory substance (what regulators do or 'the play of the game') (Berg, 2013; Jarvis & Savacool, 2011).

However, the regulatory governance aspect has gained significant traction among experts and practitioners. Research in the field has focused on analysing the quality of regulatory

governance at the national (Berg & Vargas, 2008; Lee et al., 2018) and cross-national levels (Gassner & Pushak, 2014; Buafua, 2015). This increased emphasis on regulatory governance has been triggered by the realisation that governance issues are why most regulatory agencies established since the 1980s struggle to achieve their goals (regulatory substance) (Nunes et al., 2015; Dye, 2020). In addition, regulatory governance is essential because researchers think it is a tool for rooting out bribery and corruption (Berg et al., 2012) and correcting market failures and government failures in public utility management (Levi-Faur, 2011).

Extant studies have reported that quality regulatory governance must have institutional characteristics such as autonomy, transparency, responsiveness, and credibility (Stern & Holders, 1999; Levi-Faur, 2011; Jarvis & Savacool, 2011). Thus, independent regulatory agencies perform better when they have enough autonomy and credibility and operate under transparent and responsive regulatory procedures. However, these institutional characteristics are significantly affected by the nature of institutional design and legal framework put in place in the regulatory reform process as well as the prevailing political and socio-economic context in which regulatory reforms and regulatory governance occur (Buafua, 2015; Levi-Faur, 2011; Kopecky et al., 2012). This explains why, even though most regulatory reforms have followed the UK model, regulatory reforms have produced varied outcomes across the globe (Buafua, 2015; Gassner & Pushak, 2014). This is particularly true in the developing context, including Ghana, where societies are fragmented and the political and socio-economic environments are characterised by endemic institutional weaknesses, corruption, economic instability, and political settlement, namely competitive clientelism, politicisation, and ‘short-termism’ (Appiah & Gafaru, 2017; Buafua, 2015; Dye, 2020).

In Ghana, the impetus for regulatory reforms emanated from the general economic decline in the country in the late 1970s and early 1980s, the creation of a dynamic institutional

environment in the energy and water supply sectors as part of the implementation of the World Bank (WB) and International Monetary Fund (IMF) structural adjustment policies, growing difficulties with traditional financing sources and the imminent appearance of Independent/Private Power Generators (Aryeetey & Ahene, 2005; Wolf et al., 2007; World Bank, 2013).

A significant step taken as part of the reforms in the water and electricity sectors was the establishment of independent regulatory agencies, including the Public Utilities Regulatory Commission (PURC), through an Act of Parliament, Act 538, in 1997 to regulate the country's electricity and urban water sectors. For almost three decades, the PURC, under Act 538, has been responsible for, among others, the approval of rates chargeable by public utility service providers, ensuring competition among public utility service providers, monitoring standards of performance, initiating and investigating the quality of service, as well as the protecting the interest of both utility service providers and consumers.

Though extant studies have reported some gains in terms of access, service quality, and coverage in the water and electricity sectors, a lot of the challenges that prompted regulatory reforms in the 1990s persist (Dye, 2020; Obeng-Darko, 2019) and new challenges, even more complex, in terms of institutional capacity and autonomy, have been identified within the electricity and urban water sectors (World Bank, 2013; AfDB, 2021).

Recognizing the role of regulation in addressing these challenges, there have been increasing calls for the improvement of the quality of PURC's regulatory governance (Wolf, et al., 2007; World Bank, 2013; Monney & Antwi-Agyei, 2018; AfDB, 2020, 2021).

1.3 Problem statement

The spread of regulatory reforms and the proliferation of regulatory agencies across the globe have simultaneously sparked research interest in regulatory governance. There is a growing body of literature on regulatory governance with the thrust of research focused on analysing the quality of regulatory governance across the globe (Berg & Vargas, 2008; Gassner & Pushak, 2014; Buafua, 2015; Lee et al., 2018). Researchers have often followed the primary criterion of assessing the quality of independent regulatory agencies' legal and institutional designs based on institutional attributes such as autonomy, clarity of roles, credibility, participation, accountability, transparency, and responsiveness. (Marques & Pinto, 2018; Maggetti, 2010; Jarvis & Savacool; Berg, 2013; Coglianese, 2016).

Surprisingly, despite decades of these efforts, the existing literature needs both richness and an in-depth empirical assessment of the quality of regulatory governance regarding the quality of the legal and institutional design of IRAs, autonomy, transparency, responsiveness, and credibility. Primary explanations are that, first, the body of empirical studies is limited, and the most significant portion of the literature has been contributed by practitioners and development institutions, including the World Bank, the Organisation for Economic Co-operation and Development (OECD), and the African Development Bank (AfDB). Consequently, we have only caught glimpses of the phenomenon instead of a holistic picture. With in-depth scholarly research on assessing the quality of regulatory reforms along these dimensions, we can comprehensively understand what constitutes a quality legal and institutional design and its implications for regulatory governance.

Moreover, the rise of independent regulatory agencies (IRAs) emphasising autonomy and technical capacity has raised concerns regarding the emergence of technocratic elites operating outside traditional democratic lines of control. To remedy perceived democratic deficits and control these shortcomings, IRAs have either been mandated —through a variety of procedural

requirements spelled out in their legal and institutional design— to involve external stakeholders or pro-actively adopt flexible and participatory procedures to make them responsive to the needs of their stakeholders (Braun & Busuioc, 2020). In regulatory governance, scholars have initiated evaluations of the quality of regulatory governance by examining the responsiveness of Independent Regulatory Agencies (IRAs) to stakeholders (Stern & Holders, 1999; Burman & Zaveri, 2017). Despite these initial strides, the extensive body of literature on regulatory governance falls short of providing a thorough assessment of the performance of independent regulatory agencies within these critical dimensions of regulatory governance. Without such assessments, it is challenging to ascertain the effectiveness of the regulatory roles of independent regulatory agencies for their stakeholders.

These issues along with those linked equally with legal and institutional design, responsiveness in regulatory policy reforms, and administration, are credibility issues. The credible commitment literature (Majone, 1997; Gilardi, 2011; Levi-Faur, 2011) in the context of regulatory governance argues that setting up independent regulatory agencies aims to provide a credible commitment because occasions are bound to arise where the government will stand to gain from changes to the regulated sector, for example, by reducing tariffs before an election or to stem inflation. Therefore, investors require safeguards to ensure that these opportunities will be acted upon. One way of achieving such safeguards is through the institutional and legislative design of the regulatory agencies (Ennsler-Jedenastik, 2015). Thus, governments design regulatory agencies to be autonomous from elected politicians due to the quest for policy credibility.

Another way is for IRAs to adopt responsiveness through flexible and adaptive processes and stakeholder engagements. According to Dudley and Wegrich (2020), responsive practices can procure legitimacy or delegitimise the IRA. The fundamental question that usually arises is, to what extent can politicians rely on regulatory agencies to whom they delegate discretionary

authority?” And, to what extent can the public, investors, and business community trust that politicians will not interfere in regulatory policies and that regulators will respond to their cases consistently, fairly, and impartially? Although the theoretical aspect of this conflict is well acknowledged (Majone, 1997; Levi-Faur, 2011; Gilardi, 2008), up to now, there is a dearth of research exploring its empirical consequences (Ennsner-Jedenastik, 2015). This gap hinders our knowledge of how independent regulatory agencies can provide regulatory credibility for their stakeholders. Specifically, studies that focus on analysing the credibility of PURC in Ghana's electricity and urban water sectors are limited.

Finally, current research on regulatory governance indicators does not offer an integrated perspective since it often looks at individual dimensions of regulatory governance like institutional design (Barkow, 2010), regulatory responsiveness (Burman & Zaveri, 2017), and credibility (Mueller & Pereira, 2020). As a result, we have only caught glimpses of the quality of regulatory governance. Additionally, in the utility sector, past studies often focused on access to specific parts or individual areas, like electricity or water. A significant reason is that almost all independent regulatory agencies across the globe have regulatory oversight in single sectors. Therefore, more research is needed to integrate multiple dimensions of regulatory governance—including autonomy, transparency, responsiveness, and credibility—within the context of multiple sectors. Of course, while acknowledging that one cannot study all aspects of regulatory governance in a single study, an integrated perspective that considers at least a selected number of the aspects is essential for a comprehensive understanding.

In Ghana, the Public Utilities Regulatory Commission (PURC) provides regulatory oversight of the electricity and urban water sectors, making it an ideal context for such an integrated study. Surprisingly, specific studies focused on analysing the quality of PURC's regulatory governance using indicators of legal and institutional design, responsiveness, and credibility still need to be made available. This lack of integrated study limits our knowledge of PURC's

performance in its regulatory role. Therefore, this study takes a more focused approach to bring together different aspects of regulatory governance, including its legal and institutional design alignment with critical attributes of regulatory governance, regulatory responsiveness, and regulatory credibility in the context of PURC overseeing electricity and urban water. By zeroing in on these indicators, the study gives a detailed and more nuanced analysis for a better overall understanding.

However, it is essential to state that the current study used only two attributes: autonomy, and transparency, to assess the alignment of PURC's legal and institutional design with characteristics of effective regulatory governance.

1.4 Research Objectives

The overarching objective of the study was to conduct a comprehensive qualitative investigation into the regulatory governance of the Public Utilities Regulatory Commission (PURC) in Ghana. This involved assessing the alignment of its legal and institutional design with recognised features of effective regulatory governance, evaluating its responsiveness to stakeholders in the electricity and urban water sectors, and examining the perceived level of regulatory credibility provided to stakeholders.

Specifically, the study aimed to achieve the following objectives:

1. To assess the alignment of PURC's legal and institutional design with critical attributes of effective regulatory governance, precisely autonomy and transparency.
2. To conduct an in-depth investigation into the extent of PURC's responsiveness to stakeholders in Ghana's electricity and urban water sectors.
3. To conduct an in-depth analysis of the perceived level of regulatory credibility provided by PURC to its stakeholders in the electricity and urban water sectors.

1.5 Research Questions

The following pivotal questions will steer the research, providing a clear path to understanding the regulatory credibility of PURC in the electricity and urban water sectors:

1. How does the legal and institutional design of PURC align with critical attributes of effective regulatory governance, including autonomy and transparency?
2. How do stakeholders perceive and experience the responsiveness of PURC in Ghana's electricity and urban water sectors?
3. To what extent does PURC provide regulatory credibility for its stakeholders in Ghana's electricity and urban water sectors?

1.6 Scope of the Study

This study focuses on analysing the regulatory governance of PURC in the electricity and urban water utilities sectors. The study was conducted through the lenses of public interest and capture theory. In addition, the broad literature on credible commitment models is used to support these theories and achieve the study's objectives. In analysing the alignment of institutional design with attributes of effective regulatory governance, key attributes considered were autonomy and transparency. In addition, concepts inherent in democratic theory, good governance, and credible commitment literature were used to explain responsiveness and credibility. The study adopted the PURC as a case study. The study areas included three geographically representative regions: Greater Accra in the southern belt, Kumasi in the middle belt, and Tamale in the northern belt. These regions have critical theoretical lenses for the study.

1.7 Significance of the Study

Assessing the quality of Ghana's public regulatory agencies is of paramount importance in this era of the country's drive to promote sustainable welfare through high-quality governance. This

study plays a crucial role in consolidating the gains of Ghana's regulatory reforms in the public utilities sectors, enhancing the effectiveness of these agencies as conduits for government welfare.

The significance of this study lies in its substantial contributions to knowledge, practice, and policy in public administration. The research adds to the existing body of knowledge by providing a comprehensive analysis of the regulatory governance landscape in Ghana, specifically focusing on the Public Utilities Regulatory Commission (PURC) in the electricity and urban water sectors.

The study also holds practical implications by offering valuable insights for stakeholders involved in regulatory governance, policy formulation, and sector-specific practices. It serves as a guide for practitioners, policymakers, and regulatory bodies by providing evidence-based recommendations for enhancing the quality and effectiveness of regulatory governance. By identifying strengths and potential areas for improvement within PURC, the study contributes actionable insights that can inform decision-making and foster positive changes in the regulatory framework.

In terms of policy, the study's findings can inform the development and refinement of regulatory policies in Ghana, facilitating the creation of frameworks that align with international best practices. Policymakers can leverage the research to enact changes that enhance the regulatory environment, ensuring better stakeholder responsiveness and improved credibility in the electricity and urban water sectors. Ultimately, the study constitutes a modest input into the empirical literature on the ongoing discussions of the quality of regulatory governance and provides insight into the possibility of integrating institutional design and attributes of quality regulation, responsiveness, and regulatory credibility in analysing the effectiveness of regulatory governance.

1.8 Organisation of the Study

This thesis is organised into nine chapters. Chapter One provides the general background to the study by introducing the problem that the researcher seeks to investigate, as well as the significance and benefits of this study to literature and practice. Chapter Two focuses on conceptual and empirical literature concerning regulatory governance, specifically regulatory governance in Ghana's electricity and water sector. Chapter Three reviews the theoretical perspectives underpinning this study: the public interest theory, the capture theory of regulation, and the credible commitment theory. The central tenets of these theories, their appropriateness, and how they informed the choices of variables of this study are discussed. The chapter also discusses the primary empirical literature on the quality of regulatory governance, specifically emphasising institutional design attributes such as autonomy and transparency, regulatory responsiveness, regulatory credibility, and regulatory governance challenges. Chapter Four discusses the research methodology used to collect and analyse the data to explore the study objectives. Chapters Five, Six, and Seven present the study's empirical findings. Each empirical chapter focuses on one of the three main objectives of the study. Chapter Eight discusses the empirical findings in the context of the theoretical framework. Chapter Nine presents the summary, conclusion, and recommendation. It also presents the limitations of the study and suggestions for future research.



CHAPTER TWO

CONCEPTUAL, THEORETICAL AND EMPIRICAL PERSPECTIVES

2.1 Introduction

Regulatory governance comes from the extensive body of literature on regulation and governance. Therefore, to gain a comprehensive understanding of regulatory governance in general, it is essential to understand both regulation and governance via a synthesis of conceptual, theoretical, and empirical literature. This is the main focus of this chapter.

The core aim is to establish the conceptual and theoretical frameworks for the study and subsequently proceed to discuss some empirical perspectives. The chapter ensures that the study is grounded on a suitable theoretical foundation and delves into the details of the theoretical lenses employed. In addition, some empirical literature was reviewed to see how the theoretical perspectives played in global regulatory settings and Ghana's electricity and water sectors. This comprehensive approach instils confidence in the thoroughness and reliability of the research.

Once again, it must be stated that at this stage, the focus is not on conducting an exhaustive or critical analysis of all the theories in regulatory governance, as that is beyond the scope of this work. Instead, only theories that are important in guiding the study are explained, together with carefully selected samples of the empirical studies that have used such theories over the period.

As Levi-Faur (2021, p.17) would aptly put it, numerous theories of regulation in the literature can be discussed. Notable among them are public interest theory, various strands of public choice theories (private interest or capture theory), stakeholder theory, principal-agent theory, credible commitment theory, and institutional theory. However, for this study, three of them are discussed: public interest, capture theory, and credible commitment theory, which support to explain key concepts. Based on the strengths and weaknesses of each of them, a proposed

nexus of the three theories was constructed to guide the study. In these propositions, references were made to the critical concepts above. These include independent regulatory agencies, regulatory credibility, governance quality, and responsiveness.

The later sections of the chapter focus on synthesising empirical literature within the lens of the propositions made. In conclusion, the chapter presents a conceptual framework derived from empirical reviews, in agreement with Lewin's (1952, p.169) assertion that "there is nothing more practical than a good theory."

This chapter is organised into five main sections. The first section seeks to synthesise the concepts of regulation and governance in a general context. The subsequent section offers a detailed presentation of the concept of regulatory governance, followed by a historical account of regulatory reforms worldwide, encompassing both developed and developing contexts.

The sections following this present an overview of empirical literature to see how the theoretical perspectives have played out in the regulatory space, in both the global and Ghanaian electricity and water contexts.

It is imperative to clarify again that, at this stage, the researcher's intent is not to conduct an exhaustive or critical analysis of Ghana's regulatory governance system. Such a comprehensive analysis falls outside the scope of this research. Instead, it presents the facts to foster a better comprehension of the system and potentially pave the way for more constructive discussions in the future. The goal here is to discern what should be and to better appreciate deviations as we establish what currently exists concerning the quality of PURC's regulatory governance in the electricity and urban water utilities sectors.

2.2 The Concept of Regulation

Regulation is a multifaceted concept defined and conceptualised in various ways by different scholars. This literature review explores the literature on regulation to synthesise the definitions and meanings of regulation as presented by some critical scholars in regulatory governance.

Over the past years, many efforts and resources have been dissipated into regulatory reforms and scholarship, yet the literature on regulation presents a bewildering array of definitions. As a result, the term seems to have escaped a single clear definition (Koop & Lodge, 2017). Some definitions reflect the traditional notion of regulation, in which the state, acting as a ‘night watchman’, intervenes in market failures through command-and-control mechanisms. Prosser (1997, p. 4) took this path when he defined regulation as a collection of “public interventions that affect the operation of markets through command and control.”

Regulation is also seen as a tool used by the government to control the behaviour of others in pursuit of determinate standards. This notion is seen in Windholz’s (2018, p. 8) definition of regulation as a “structured process undertaken by or under the auspices of government designed to modify the behaviour of persons or entities according to defined standards.” Similarly, Scott (2012, p. 1) defined regulation as a “sustained and focused control exercised by a public agency over activities valued by a community.” Scott’s definition suggests that the government’s regulatory actions aim to preserve what society generally holds as essential to promote and maintain a safe, fair, and orderly society. The assumption is that while people are free to behave in specific ways for their general well-being, some behaviours deviating from society’s generally accepted norms must be controlled. This notion is better reflected in the detailed definition of Lodge & Wegrich (2012, p. 25), who defined regulation as “an intentional activity that seeks to alter the behaviour of another party.”

Through activities, including standard setting, behaviour modification, and information gathering, Majone (1996) defines regulation as a “sustained and focused control exercised by a public agency, based on a legislative mandate, over activities generally regarded as desirable to society.” This definition underscores the idea that regulation involves deliberate and persistent control by government entities, primarily through legislative mandates, over activities deemed beneficial to society. However, as Minogue (2002) points out, this definition has limitations as it restricts the authority to create regulatory laws solely to the legislature, whereas, in practice, regulatory laws can originate from various sources beyond the legislative branch.

Another standard definition of Regulation is “using public authority to set and apply rules and standards” (Hood et al., p.3, 1999). This definition offers a broader perspective by acknowledging that regulatory laws may emerge from diverse sources and involve applying rules and standards by public authorities. However, as Minogue highlights, this broader definition lacks specificity regarding who the regulators are and the underlying purposes of regulation. It does not provide a clear understanding of the stakeholders involved in the regulatory process and the ultimate goals of the Regulation.

Essentially, as stated before, "regulation" eludes a singular, all-encompassing definition. The difficulty in defining regulation emanates from its intricate nature and the diverse ways it is used in various contexts. Scholars have grappled with this complexity, and consequently, various definitions capture different aspects of regulatory governance. To better grasp the concept of regulation and its evolution, the following section will review the collective efforts of researchers to conceptualise and establish a more comprehensive understanding of Regulation. This ongoing scholarly discourse aims to shed light on the dynamics of regulatory practices in modern governance.

2.2.1 Regulation and Conceptual Challenges

Levi-Faur (2011, p. 3) observes that the difficulty in arriving at a consensus on a single definition of regulation results from the varying discursive, theoretical, and analytical purposes for which the term is used. Second, there are multiple perceptions of the term. Some characterise it as a negative word connected to tenets of totalitarianism, a tool for protecting the interests of the dominant class in society, and a subtle way of preserving and entrenching power relationships in the political system. For some, however, regulation is a public good, a tool for controlling the unsustainable behaviours of business actors to secure society's economic, ecological, and social benefits.

Minogue (2002) also noted from the literature a legalistic approach, which views regulation as a formal and legal process that involves the formulation and application of rules. Another approach is the economic approach, which primarily views regulation as a means by which private business actors are “constrained from anti-competitive behaviour” (Minogue, 2002, p. 650). He further explains that while the former aligns with the traditional view of government acting in pursuit of public interest through a ‘command and control’ regime, the latter corresponds to the notion that regulation creates favourable conditions for efficient market operation.

2.2.2 Regulation and the Search for Conceptual Consensus

In search of a consensus on the conceptualisation of the term, researchers have continued to review the literature on regulation and regulatory governance. Orbach (2016) provides definitions from classical works, including that of John Stuart Mills, who defined regulation as “governmental intervention in society as well as the laws that establish such interventions.” However, his search for consensus on definitions from contemporary works yielded no positive results. Baldwin et al. (1998, 2012) curated three critical characterisations of the concept of regulation: first, regulation is “the promulgation of an authoritative set of rules, accompanied

by some mechanism for monitoring and promoting compliance with these rules”; second, regulation as “all the efforts of state agencies to steer the economy”; and third, regulation as “all mechanisms of social control, including unintentional and non-state processes.”

However, Koop and Lodge (2017) observe that some definitions have enjoyed relatively good international acceptance. These include Selznick’s (1985) definition: “sustained and focused control exercised by a public agency over activities that are valued by the community” (cited in Koop & Lodge, 2017, p. 95–96), as well as Black’s (2002) definition: “the sustained and focused attempt to alter the behaviours of others according to defined standards and purposes to produce a broadly identified outcome or outcomes, which may involve mechanisms of standard setting, information gathering, and behaviour modification”(cited in Koop & Lodge, 2017, p. 96).

Furthermore, Koop and Lodge (2017) adopted a new method to analyse conceptions of regulation held in the most cited articles across four social science disciplines: economics, business, law, and political science. They found that despite the scarcity of explicit definitions of regulation and its vastness in scope, there is an identifiable consensus on its conception in the literature. Consequently, they depart from the notion that contemporary regulation has no conceptual understanding. They conclude that “regulation is a field with broad but shared conception and different but largely interdisciplinary research agendas.”

This view is corroborated by Van der Heijden’s (2021, p. 3) recent study, which reviewed the international academic literature on regulation over the last five decades. His findings showed a significant expansion in the conceptualisation of the term with diverse and multiple definitions within the field of public administration. Notwithstanding, he concluded that there is a consensus on the conceptual meaning of regulation in the public administration theory of regulation. From his analysis, he concluded that all the definitions converge on the notion that

“regulation is an intentional, often structured, and sustained process implemented by an individual or collective (‘regulator’) to direct the behaviour of other individuals or collectives (‘targets’) to achieve a predefined aim through a variety of interventions (‘instruments’ and ‘strategies’) that typically include standard setting, monitoring, enforcement, and retribution or rewards” (p. 3), which are essential tools for ensuring that individuals and organisations operate in a manner that is consistent with the public interest and that they are held accountable for their actions.

However, in recent times, the discussions surrounding the concept of regulation have evolved, reflecting a range of perspectives and dimensions. Braithwaite (2008) defines regulation as a wide array of instruments, institutions, and processes that governments employ to encourage socially favourable outcomes, deter undesirable ones, and safeguard the integrity of markets, institutions, and the environment. This definition suggests the comprehensive nature of regulation and its essential role in promoting the common good.

Similarly, Baldwin et al. (2012) describe regulation as a set of activities carried out by regulatory authorities to directly or indirectly influence the behaviour of those subject to regulation, all in the interest of the broader public. This definition emphasises the role of regulation in advancing public welfare.

On the other hand, Ogus (2004) takes a more technical stance by defining regulation as the deliberate and formal intervention by public authorities in the economy to achieve specific objectives. This definition highlights the formal nature of regulation and its intended purpose.

Researchers have also delved into different types of regulation. For example, Hutter and Power (2018) differentiate between two types: command-and-control regulation, which entails setting precise rules and standards, and responsive regulation, which adopts a more flexible approach

that focuses on achieving desired outcomes while allowing room for experimentation and adaptation.

In conclusion, the concept of regulation is intricate and multifaceted, with different researchers highlighting various facets of the phenomenon. This notwithstanding, all these definitions underscore the role of regulation in promoting the public good and influencing the behaviour of those subject to regulation.

This prevailing consensus may reflect the government's evolving nature and function, transitioning from its traditional command-and-control mechanism to governance, which involves supervisory roles over other actors. Additionally, there have been shifts in the approaches and theories of public administration. Van der Heijden (2021) identifies three primary cohorts of scholarly contributions related to the field of public administration:

1. The 'Traditional' Chicago School of Law and Economics, prevalent in the 1970s and 1980s, was grounded in an economic cost-benefit rationale and pursued by rational proponents and opponents of regulation.
2. New Public Management (NPM), popular in the 1990s and early 2000s, stressed the need to shift the government's role from 'rowing' to 'steering' and to incorporate more market-oriented solutions to complex problems.
3. New public governance scholarship from the late 2000s and 2010s, characterised by renewed interest in the government's role in addressing complex societal issues or 'wicked problems' (such as climate change, global inequality, and the Fourth Industrial Revolution) as well as a more realistic (less rational) model of human behaviour.

Considering this background, it is reasonable to conclude that, unlike the limited definitions found in earlier literature, regulation can be more comprehensively defined as the systems,

procedures, and tools implemented to guide the actions of individuals and groups toward socially beneficial objectives (Van der Heijden, 2020). It can also be seen as “the ex-ante Bureaucratic legalisation of prescriptive rules and the monitoring and enforcement of these rules by social, business, and political actors on other social, business, and political actors” (Guidi et al., 2020: p. 5). This expanded understanding acknowledges regulation's multifaceted and intricate nature and impact on society.

2.3 The Concept of Governance

The conceptualisation of the term governance is one of the most contested debates in the governance literature. It appears the most significant deadlock on the concept of governance has primarily centred around finding consensus on the meaning and role of the state. Consequently, the meanings of the concepts of governance and government are often conflated in the literature. This is understandable due to their common origin. The word governance, like government, has roots in the Latin phrase *gubernare*, a word translated from the Greek word *kybernan*, meaning ‘to pilot’, ‘steer’, or ‘direct’ (Levi-Faur, 2011. P. 4). Secondly, as noted by Levi-Faur (2011), like government, governance has four essential contextual meanings: either as a structure, as a process, as a mechanism, or as a strategy.

Levi-Faur (2011; p. 4) explains how each of these contexts is used. First, as a structure, governance connotes such characterisation as a ‘system of rules’, ‘institutional modes of social coordination, and a set of multi-level’, ‘non-hierarchical and regulatory institutions. As a process, it signifies “the dynamics and steering functions involved in lengthy never-ending processes of policy making”. It also connotes the ongoing “practices of governing” or building the capacity of institutions to enhance their steering and coordination (Kooiman, 2003, p. 48). Third, governance as a mechanism connotes “institutional procedures of decision-making, compliance and control”. Such mechanisms of decision-making may be based on either monetised or market exchange, non-monetised exchange (based on resources that cannot be

quantified in monetary terms), command exchanges (based on rules and compliance), persuasion exchange (exchange of ideas and information in a deliberative manner) or solidarity (which rests on loyalty and other soft skilled values such as love, faith and communalism). Finally, as a strategy, governance depicts the efforts adopted by actors “to govern and manipulate the design of institutions and mechanisms to shape choice and preferences.”

2.3.1 What is Governance?

It is hard to find a consensus on the conceptualisation of governance as literature is replete with multiple conceptualisations. This section reviews some of the conceptualisations of the term.

The definition of governance remains a longstanding topic of debate in academic literature. According to Bach (2004), there are two central notions about the meaning of governance. The first notion is that governance is the governing process, regardless of the actors involved. In contrast, the second suggests that governance refers to changes in the group of actors involved in governing as proposed by Rhodes, 2012. Additionally, Williamson (1979) identifies four types of governance: market, unilateral, bilateral, and trilateral, although these classifications have not received significant attention in the literature.

In addition, Kersbergen and Waarden (2004) conducted detailed analyses of the literature across disciplines and curated nine different notions of governance in literature. The first notion was governance as good governance, which emphasises economic reforms such as those championed by the Bretton Woods institutions in developing countries. The second use of governance is governance without government, in the form of international or global governance. A third notion is governance without government and the market, in the form of the self-organisation of communities. In support of this view, Ostrom (1990) provides evidence to show how small communities can self-organise and manage their resources to benefit the whole community without the help of a formal government.

A fourth use of the term is economic governance, which connotes the governance of the economy with or without the state. This notion emphasises the leadership of markets and their institutions. Two leading schools within this notion are classical economics, which assumes markets are spontaneous social orders that blossom best without government intervention and institutional economics, new institutional economics, economic sociology, and comparative political economy, which, following Hobbes, assume that markets are not spontaneous social orders but need to be created and maintained by institutions; the assumption is that the natural societal condition is one of chaos, uncertainty, and conflict.

The fifth usage of governance in literature is good governance in the private sector, primarily known as corporate governance. The sixth notion of governance in literature is New Public Management, which seeks to inject good governance into the public sector. This notion of governance emphasises the market's leadership in the policy implementation process, and it is largely inspired by public choice, principal-agent theory, and transaction cost economics (Kaboolian, 1998). The seventh notion of governance in literature is network governance through a constellation of actors, including private businesses, NGOs, International Organizations, Local Governments, etc. The eighth notion of governance connotes governance through networks by multi-level governance, which comprises private and government actors at the national, sub-national, and supranational levels. The ninth notion of governance is governance networks through private actors. In this network, governments are replaced by private firms through various modules of inter-firm cooperation.

Levi-Faur (2011) also reviewed the governance literature and distinguished “four perspectives of the state in the age of governance.” The first perspective of governance describes governance as “hollowing out of the state”, which means the “shift from government to governance.” The second perspective is that in modern governance, the government is no longer the “cockpit”

from where policy originates but rather from multiple societal actors, including private businesses, international organisations, NGOs, local governments, etc, Rhodes (1997, p. 57) puts it better: “The state becomes a collection of inter-organisational networks made up of governmental and societal actors with no sovereign actor able to steer or regulate.”

The second perspective connotes the idea of “de-governance,” which involves a complete hollowing out of politics except the markets. This perspective sounds more like classical economic theory, where the markets organise social order without the intervention of any external institution.

According to Levi-Faur (2011), the third perspective of governance is the state-centred view. This view, though acknowledging the shifts in government authority, the reorganisation of society, and the critical role of other actors (private firms, NGOs, international organisations, etc.), maintains that the state remains the central lead in the political process.

The final perspective of governance is regulatory capitalism/regulatory governance, which conceptualises governance from the regulation perspective. Levi-Faur argues that the regulatory governance perspective holds that the government is not entirely hollowed out but expanding and becoming bigger through regulations. Consequently, there is a growth in the government's capacities and the regulatory roles of other societal actors. In effect, regulatory governance assumes that government is becoming bigger not through hierarchies but through regulation.

2.3.2 The Big Debate on “What is Governance”

The section concludes with a review of the considerable debate among political scientists on the Governance blog, which started with Fukuyama’s commentary on “What is Governance?”

In order not to step beyond the scope of this study, only matters that mainly stimulate our understanding of the concept of governance are considered in this review.

In Fukuyama's (2013) commentary, he asks: "How do we measure governance?" He argues that "existing measures of government quality" are "woefully inadequate." Of course, his suggestions on measuring governance in terms of capacity and autonomy will be discussed later in the study. What is of interest now is his conceptualisation of the term governance. He suggests a need to conceptualise governance better to measure it better. Consequently, he defines governance as "a government's ability to make and enforce rules and to deliver services, regardless of whether that government is democratic or not." He asks why "everyone is interested in studying political institutions that limit or check power, but very few people pay attention to the institution that accumulates and uses power, the state."

Fukuyama's commentary has received mixed reactions from scholars in the field. Indeed, significant areas of his commentary have been praised, particularly his call for a better conceptualisation of the term "governance" (e.g., Thomas Hale, Lan Xue) and the call to measure governance better (Thomas et al.). Unfortunately, his conceptualisation of the term governance has aroused serious concerns, particularly among the key contributors to the field of governance (e.g., Thomas Risse, David Levi-Faure, Bo Rothstein, Sudhir Kumar, and Matt Andrews).

First, it is difficult to tell whether Fukuyama sought to use governance as his conceptual framework. How he conflates governance with such terms as "good governance" and "government quality" is somewhat confusing. In his response to Fukuyama, Carlos Santiso wrote: "However, as Rothstein and de Renzio note, Fukuyama's approach is much closer to assessing the quality of government than the quality of governance. Thomas Risse argues that Fukuyama's understanding of governance as 'governance by government' is only too narrow.

Second, it was noticed that almost all the scholars who responded to his commentary on the governance blog had issues with his definition of governance: "a government's ability to make

and enforce rules and to deliver services, regardless of whether that government is democratic or not.” In the words of Levi-Faur, “While it is hard to agree on one definition of governance (and government and the state and autonomy, etc.), Fukuyama’s definition of governance is more in tune with the definition of ‘governability’ than with governance.”

Third, it appears Fukuyama had not seen more than three decades of literature on governance. This is because his definition of governance is inconsistent with how the significant contributors in the field have defined governance. Levi-Faur’s comments were, “I find the definition puzzling” and “None of the fifty contributors defined governance this way.”

Fourth, Fukuyama seemed to be oblivious to the fact that, in modern times, governments are not the only entities through which states are governed. As a consequence, as noted by Levi-Faur, Fukuyama’s state-centric approach to governance ignores the role other actors play in governance. “He ignores the role networks play in building the capacities of states in providing services and enforcing rules,” says Levi-Faur. This view is also reflected in Thomas Hale’s response. According to him, “government agencies are just one of the several types of organisations engaged in governance. Many other actors exist, including NGOs, international organisations, private companies, social enterprises, etc.

Sudhir Kumar’s response particularly emphasises the importance of a polycentric approach to governance. He states that, “Fukuyama’s idea of governance begins with the notion of government. We need effective checks from various economic, social, and international actors. The idea of governance is rather against too much expansion of the government.” Matt Adrews adds that the government’s capacity is enhanced through the interdependent relationships that governments foster with other actors in the governance process. As a result, governance goes beyond the government to include so many actors in society. However, it is essential to add that the role of government in governance remains so crucial that it is indispensable, especially

in challenging times such as disaster, climate change, war, etc. Matthew Flinder's response to Fukuyama's comment aptly reflects the view that the government plays the role of "rescue."

David Levi-Faur's response particularly points to governance from the perspective of regulatory governance. He expresses concern about why Fukuyama fails to acknowledge the role of regulatory governance in enhancing governability. He further argues that regulatory governance has served as the critical core of governance in recent times; hence, the focus should now be on regulatory governance rather than mere governance or mere regulation. He calls for elevating the regulatory capacities of policy networks and regulatory regimes and transitioning from bureaucracy to "regulocracy." The following section, therefore, focuses on presenting the concept of regulatory governance.

2.3.3 From Regulatory State to Regulatory Governance

Levi-Faur's (2021) analysis sheds light on the evolution of the governance model, transitioning from the traditional concept of the "regulatory state" to the contemporary era of "regulatory governance." Anderson introduced the term "regulatory state" in 1962, though he did not give an extensive conceptual definition. Instead, he provided a perceptive examination of the emerging administrative system, which was characterised by the establishment of independent regulatory bodies to manage public sector affairs.

Further exploration of the "regulatory state" concept can be attributed to Seidman (1986), who, unlike Anderson, approached the idea of a regulatory state from the perspective of reducing government involvement and highlighting limitations. However, he did not give a comprehensive definition of the term. The term gained more prominence with the works of Majone (1994,1997). Majone's conceptualisation of the "regulatory state" emphasised transitioning from a positive state model, characterised by public ownership, service provision,

and centralised bureaucracy, to a model where state governance relies on regulatory apparatuses rather than direct government hegemony.

Notwithstanding, in recent times, a significant shift has occurred from the traditional “regulatory state” concept to the concept of “regulatory governance.” As Levi-Faur et al., (2021) opines, this transition considers a broader expansion of regulation, signaling a shift towards a “whole of society” approach to regulation. In contrast to the “regulatory state” approach where the state acts as the central hub for all regulatory activities, “regulatory governance” signifies a departure from “big government” to “big governance.”

Under the framework of “regulatory governance,” governance is no longer solely the state's duty. Instead, it involves a collaborative effort among various actors, including government entities, civil society, international actors, and private businesses. This approach recognises the growing complexity and interdependence of regulatory processes, which go beyond the traditional boundaries of the state. Consequently, society's governance is increasingly modelled by a constellation of actors, focusing on obtaining effective and flexible regulation while adapting to evolving societal needs and challenges.

2.3.3.1 Regulatory Instruments

As Ogus (2001) categorised, regulatory instruments can be broadly classified into two main forms: economic and social regulation. These instruments serve different purposes and are used in distinct aspects of governance.

Economic Regulation primarily targets markets that are deemed insufficiently competitive. The key objective of economic regulation is to introduce measures that establish or promote market competitiveness. So, to achieve this, various actions like formulating laws related to competition and implementing legal mechanisms are taken to control prices and enhance product and service quality. Economic Regulation is fundamentally concerned with promoting

fair competition, preventing market abuses, and ensuring that economic activities in these markets benefit the broader public by promoting efficiency and preventing monopolistic behaviour. This approach helps create a level playing field and retains the market's integrity.

Social Regulation, on the other hand, is primarily concerned with promoting public welfare, health, and safety. It focuses on regulating business operations to mitigate potential harm or loss. Several vital activities fall under the umbrella of social regulation, including:

Prior Approval: Businesses must obtain licenses or permits from the relevant authorising agencies before commencing their operations. This ensures that firms meet certain criteria and adhere to specific regulations to protect public interests.

Mandatory Standards: Social Regulation often involves setting performance and specification standards that companies must meet. These standards are typically defined by the regulatory agency responsible for formulating them to ensure the safety and quality of products and services.

Information Disclosure: Companies are mandated to provide information to the public regarding potential harm and risks associated with their operational activities and products. Transparency is essential in social regulation to empower consumers and stakeholders to make informed decisions.

Economic Instruments: Local governments may employ economic instruments as part of social regulation. This can involve offering incentives such as tax breaks or charges to businesses, to encourage compliance with regulations related to environmental protection or safety standards that benefit the public.

In conclusion, while economic regulation seeks to promote competition and regulate market dynamics, social regulation is concerned with safeguarding public interests, health, and safety

by imposing rules and standards on business activities. Both forms of regulation play crucial roles in maintaining a balanced and equitable marketplace while ensuring that the well-being of individuals and society is protected.

2.4 Regulatory Governance

This section reviews the meaning and history of regulatory governance.

2.4.1 Regulatory Governance and Regulatory Incentives/Substance.

Levy and Spiller (1994) divide the regulatory system into two key dimensions: regulatory governance and regulatory incentives. They define regulatory governance as “the mechanisms societies use to constrain regulatory discretion and resolve conflicts that arise about these constraints.” According to them, the regulatory incentive structure entails “the rules governing utility pricing, cross- or direct subsidies, entry, interconnection, etc.” (Levy & Spiller, 1994, p. 205). They observe that over the years, regulatory incentives have been the central focus of almost all theoretical work on regulation, making them inadequate. According to them, while regulatory incentives lead to regulatory performance, their impact highly depends on the nature of regulatory governance in place. More importantly, the successful design of regulatory incentives or substance is significantly affected by the quality of the “country’s institutional endowment, the character of distributive politics, and the nature of its regulatory governance.”

This view is supported by existing scholars like Gutiérrez (2002), who also argue that the regulatory governance aspect of regulation is initially more helpful. In that, an excellent regulatory governance regime is required to set the tone for an effective regulatory incentive. Jarvis and Savacool (2011) and Nunes et al. (2015) argue that regulatory governance issues are why regulatory agencies struggle to achieve their goals.

As a result, there has been a growing body of literature on regulatory governance in recent times, with much of it assessing the quality of regulatory governance within and across nations.

In addition, much of the literature explains regulatory governance from the governance perspective. As a result, regulation and governance have become core concepts in the social sciences (Levi-Faur, 2011). Regulatory governance, therefore, is increasingly becoming a buzzword in both the regulation and governance literature. For instance, in response to Fukuyama's "What is Governance" commentary, Levi-Faur points out that the most current stage of governance is in terms of regulation.

2.4.2 Meaning of Regulatory Governance

Various scholars have defined regulatory governance in different ways. OECD (2002) defines regulatory governance as a concept that entails the design and implementation of instruments, the methods for assessing the impact of regulation, and governance principles such as transparency, accountability, efficiency, adaptability, and coherence (Zhang, 2010: 776). In other words, it involves a set of principles, policies, and practices that guide the development, implementation, and enforcement of regulations. Minogue (2006) demonstrates what regulatory governance entails in a more encapsulating manner. According to him, it encompasses a wide array of government institutions. He wrote:

The governance of regulation and competition must be taken to cover the whole range of government institutions involved in making rule-making and implementation, the public policy processes which involve this set of institutions, the interactions of public organisations and actors with private organisations and actors; the significance of political factors: political will and leadership; the interactions of political and economic elites; political interventions in rule adjudication (especially in the actions of judicial or other regulatory actors); the use of political relationships either to achieve regulatory capture or to build trust relationships which underpin elective

informal regulation; and the system of public values which provides the setting for regulation and competition (Minogue, 2006, p.665).

In a seminal presentation, Minogue (2006) defined regulatory governance as governance in regulation. Notwithstanding the avalanche of definitions, almost all definitions of regulatory governance converge on the notion of governance through networks, which comprises multiple actors, including government institutions, private institutions, NGOs, International Organizations, etc. This is better captured in the definition by Bailleisen et al. (2018), who defined regulatory governance as the framework of institutions, policies, and practices that govern the behaviour of regulators, regulated entities, and other stakeholders in the regulatory process. Regulatory governance involves balancing the interests of various stakeholders, including consumers, investors, and the broader public, to promote socially desirable outcomes.

2.4.3 Concepts of Independent Regulatory Agencies, Regulatory Credibility and Regulatory Commitment

Along with the proliferation of independent regulatory agencies has come an increased spread of scholarly inquiry into the why and how of the spread of IRAs across the globe (Majone, 1997, 2002; Levi-Faur, 2005; Gilardi, 2005; Maggetti, 2010). Both scholars and practitioners have been puzzled by this trend because it is surprising that, considering the problems of information asymmetry that characterises the relationship between political officials (principals) and the agencies they establish to act on their behalf (agents), one would have expected that political officers, instead of IRAs, would hand over regulatory functions to government agencies within the executive arm, which they could always control.

Even though there are various reasons for this choice (Gilardi, 2005), regulatory credibility is popularly cited as the reason for this trend (Majone, 2001). Consequently, there has been an

increased research attention in that area, leading to the emergence of credible commitment theory in the regulatory governance literature (Gilardi, 2005; Majone, 1996, 1997, 2016).

Regulatory credibility refers to the trust and confidence people have in regulatory actors that they will continue to respond to their needs. Credible commitment, conversely, refers to the commitment political officials and regulatory actors make to attain regulatory credibility for stakeholders.

The central argument of the regulatory commitment theory begins with the assumption that governments find it difficult to stick to their earlier proposed plans, probably because they have a wide array of discretion over their policy choices (Ennsner-Jededastik, 2015). This makes other stakeholders, including investors and consumers, unable to trust that the government will always commit to what they say. Meanwhile, governments sometimes want to appear credible to attract investors and other stakeholders by assuring them that they would be dedicated to policy proposals. Unfortunately, sometimes, the government does not make such commitments out of their motivations, so they adopt measures that will keep them from breaking their promises. As Enneser-Jedidasktik (2015, p. 508) puts it, if governments cannot commit to their promises through their motivations ('motivational credibility'), they do so by placing limitations on their own 'discretion to deviate from their earlier stated policy.' Credible commitment is the mechanism by which they achieve such ends.

In sum, regulatory credibility is the crucial reason elected politicians establish IRAs. However, because they acknowledge their frailty, to achieve such motivations, they opt for a self-binding institutional design to prevent them from interfering in the activities of IRAs. The independence given to IRAs is expected to give them the autonomy and flexibility to respond to the needs of stakeholders. This is called regulatory responsiveness.

2.4.4 The concept of regulatory responsiveness.

In the framework of governance and regulation, responsiveness has typically been conceptualised so broadly that it has yet to produce a clear definition. However, it is defined in the ground-breaking work of Ayres and Braithwaite (1992) as being receptive to the actions of regulated agents. For self-enlightened actors, they support a flexible rehabilitative method; for "deviant" actors, they support deterrent steps. In a democracy, the government must be accountable to the people and able to adapt to the needs of different constituencies. When elected officials make decisions about public policy in a representative democracy, they are supposed to consider the needs and opinions of the people, not just their own or a limited set of private interests.

In the context of regulatory governance, however, regulatory responsiveness can be characterised as the pursuit of proactive and participatory approaches in regulation so that the regulator aligns regulation to the interest of the regulated to its stakeholders. It also means the regulator's responsiveness in carrying out its quasi-legislative duties.

The issue of being responsive to the public is significant when it comes to unelected or indirectly accountable organisations, like independent regulatory agencies (Burman & Averi, 2017). According to Coglianese et al. (2009), these agencies are more responsible for acting fairly and transparently, avoiding regulatory capture, and demonstrating accountability to the principal appointed. Their policies must also be accepted by those who did not directly elect them.

For example, Stern and Holder (1999) suggest a set of general metrics to assess whether regulatory bodies consult stakeholders during the decision-making process. Black (1998) made the case that regulatory responsiveness is a crucial component of successful regulation in his

work, which is another early reference to this concept. Black claims that regulatory responsiveness entails taking adaptable and proactive approaches to regulation.

Similarly, in financial regulation, Venkatraman (2014) emphasised the importance of regulatory responsiveness in the aftermath of the global financial crisis. According to Venkatraman, regulatory responsiveness involves a more proactive and collaborative approach to regulation focused on preventing systemic risks and promoting financial stability.

Regulatory responsiveness refers to the ability of regulatory agencies to adapt to changes in their operating environment, such as changes in technology, market dynamics, or public opinion. This concept has recently received significant attention in the academic literature, with scholars examining various aspects of regulatory responsiveness.

One aspect of regulatory responsiveness that has been extensively studied is regulatory capture. Regulatory capture occurs when regulatory agencies become too closely aligned with the interests of the industries they regulate at the expense of the public interest (Stigler, 1971). Scholars have argued that regulatory capture can inhibit regulatory responsiveness by making agencies resistant to change (Balla & Wright, 2001).

Another factor that has been shown to influence regulatory responsiveness is the institutional design of regulatory agencies. Studies have found that agencies with greater independence from political influence are more responsive to changes in their operating environment (Majone, 1997). Similarly, agencies with more significant resources, such as staff and budget, can adapt to changes (Kagan & Scholz, 1984).

The political environment can also significantly affect regulatory responsiveness. For example, studies have found that regulatory agencies are more responsive to changes in public opinion when there is a strong political mandate for regulatory action (Braithwaite, 2002). Similarly,

regulatory agencies may be more responsive to changes in the political environment when there is a greater degree of partisan competition (Huber & Shipan, 2002).

Finally, some scholars have examined the role of regulatory networks in facilitating regulatory responsiveness. Regulatory networks are complex relationships between regulatory agencies, industry groups, and other stakeholders. Studies have found that regulatory networks can facilitate information exchange and cooperation, leading to more excellent regulatory responsiveness (Levi-Faur & Jordana, 2005).

In conclusion, the literature suggests that various factors influence regulatory responsiveness. Some of these factors are, regulatory capture, institutional design, the political environment, and regulatory networks. Understanding these factors is crucial for policymakers and regulators seeking to promote effective and adaptive regulation.

In summary, regulatory responsiveness has developed over time and has roots in the larger area of regulatory governance. Regulatory responsiveness is crucial to creating successful regulatory strategies in various circumstances, from early examples of regulatory flexibility in telecommunications regulation to more recent emphasis on proactive and collaborative approaches to regulation. The following are some crucial elements of utility sector responsive regulation:

- i. Cooperating relationships that promote constant feedback, discussion, and communication on service performance, quality, and cost between consumers, service providers, and regulators.
- ii. Regulatory policies and procedures are flexible enough to be adjusted and modified in response to shifting consumer demands, technological developments, and market conditions.

- iii. Systems for monitoring and evaluating performance and quality of services so that regulators can monitor them and use the information to inform their decisions about regulatory interventions and penalties.
- iv. The procedures for guaranteeing openness and accountability in the delivery of services include ongoing reporting, audits, and public participation.
- v. Penalties for non-compliance with regulations, rewards for meeting or surpassing them, and other incentives to encourage service providers to enhance service quality, performance, and pricing.

2.4.4.1 Measures to enhance regulatory responsiveness

Empirical studies on responsive regulation in the utility sector in developing countries are relatively limited. However, some studies have examined the effectiveness of regulatory reforms in promoting investment, improving service quality, and increasing access to essential services.

For example, a study by Burman and Averi (2017) analysed the regulatory responsiveness of some vital regulatory firms in India. The findings show that the degree of responsiveness of IRAs is directly proportional to the legislation that defines the responsiveness processes. This study suggests that responsiveness will be effective if the laws allow flexibility and proactive practices.

Hong and You (2018) highlight the need for democratic regulatory responsiveness, emphasising that regulators should be responsive to regulations and broader public needs and preferences.

Stern and Holder (1999) proposed measures to assess the responsiveness of regulatory agencies to stakeholders in their decision-making. The measures are presented in table 2.1 below:

Table 2.1: Summary of best practices for regulatory consultations, Stern & Holder (1999)

Serial No.	Recommendation
1	Formal consultation exercises
2	Formal or informal hearings
3	Surveys of customer views and priorities
4	Genuine chance of influencing decisions

Source: Burman & Zaveri (2017)

OECD (2014) has also provided international best practices for ensuring regulatory responses. They mentioned the following: impact assessments are a crucial component of the consultation process; measures must, first and foremost, have carefully thought-out policy objectives and be written clearly and precisely to enable stakeholders to offer thorough feedback; second, outreach needs to happen while the consultation process is underway; third, there needs to be a government-wide policy that is unambiguous, quantifiable, and enforceable regarding active stakeholder participation in creating and reviewing regulations; fourth, enough time should be set aside for the consultation process, especially when discussing significant reforms; and five, any suggested new regulations make sense and are consistent with the current regulatory framework.

In conclusion, these studies indicate that regulatory reforms grounded in regulatory responsiveness must have flexible practices, effective stakeholder engagement, effective communication, and be timely.

2.4.5 Regulatory credibility

Regulatory credibility refers to the perception that regulatory agencies are reliable, trustworthy, effective, and independent in carrying out their mandates (Jarvis & Savacool, 2011). It has to do with stakeholders' faith in the legitimacy and efficacy of regulatory bodies and their rulings, which includes the general public, corporations, and legislators.

In recent years, there has been growing interest in understanding the factors contributing to regulatory credibility, and several studies have been conducted on this topic. Christensen and Lægreid (2006) highlight how national administrative traditions influence the development of regulatory changes. They cast doubt on functionalist theories, which frequently assume that regulatory bodies can function according to universal goals and principles. Their work emphasises that institutional, historical, and cultural aspects specific to a nation significantly impact the credibility of regulations, which is not only a function of functional efficiency. Stated differently, the degree to which regulatory reforms align with a country's administrative traditions determines their likelihood of success and establishing regulatory credibility. This implies that context-specific factors should be considered when designing and reforming regulations as a one-size-fits-all approach may not be effective.

Similarly, Gilardi (2002) investigates the credibility hypothesis, which holds that governments assign regulatory authority to increase policy legitimacy. The study provides Empirical evidence in favour of this theory, emphasising how governments frequently delegate regulatory authority to independent organisations as a sign of their commitment to long-term policy goals. By doing this, governments can reassure stakeholders that decisions are based on expert analysis rather than partisan expediency depoliticising some regulatory decisions. This power transfer could increase the legitimacy of the regulatory process and promote stakeholder confidence.

Majone (2000) addresses the issue of community regulation's need for more credibility, especially in light of the European Union. The incompatibility of the available administrative tools to handle regulatory tasks and their complexity is highlighted in the paper. Majone suggests delegating to autonomous European agencies to close this credibility gap. By creating these specialised agencies, the EU can show its dedication to efficient regulation and proficiency in managing complex policy matters. This delegation can reassure domestic and international stakeholders by bolstering the legitimacy of the European regulatory framework.

Mueller (2006) focuses on how Brazilian regulatory agencies were designed with credibility in mind. It draws attention to the trade-off between control and credibility, arguing that regulatory bodies must balance maintaining the necessary level of independence to establish their credibility and remaining answerable to the public and government. Mueller's study sheds light on the organisational structures and mechanisms that can affect the efficacy and dependability of regulatory bodies, offering insights into how agency designs affect regulatory credibility.

In conclusion, these studies collectively add to our understanding of regulatory credibility by highlighting the significance of national administrative traditions, the credibility hypothesis, the difficulty of regulatory tasks, and the trade-off between control and credibility. They emphasise the significance of considering context when designing and reforming regulations and the advantages of delegating to independent agencies to boost regulatory credibility. Policymakers and regulatory professionals can use these insights to help build and preserve regulatory bodies' legitimacy in various situations.

Based on the studies of researchers such as (Majone, 1997, 2011; Levi-Faure, 2011; and Gilardi, 2011), the following features of regulatory credibility can be identified:

- i. **Transparency:** The degree to which regulatory agencies disclose their decision-making processes and communicate their actions to stakeholders. Transparency can be

measured through indicators such as the frequency of public consultations, the publication of regulatory impact assessments, and the availability of public records.

- ii. **Consistency:** The extent to which regulatory agencies consistently apply their rules and decisions over time and across different cases. Consistency can be measured through indicators such as the level of discretion in regulatory decision-making and the frequency of legal challenges to regulatory decisions.
- iii. **Accountability:** The degree to which stakeholders, including elected officials, industry groups, and the general public, hold regulatory agencies responsible for their actions. Accountability can be measured through indicators such as the frequency of regulatory oversight and audits, the level of public trust in regulatory agencies, and the responsiveness of regulatory agencies to stakeholder feedback.
- iv. **Effectiveness:** The extent to which regulatory agencies achieve their stated goals and objectives, such as protecting public health and safety or promoting economic growth (Sunstein, 2011). Effectiveness can be measured through indicators such as the level of compliance with regulatory requirements, the incidence of regulatory violations, and the impact of regulatory actions on the behaviour of regulated entities.
- v. **Reputation of Board members:** The extent to which board members are free from political interference, their level of expertise and qualification, and their abstinence from issues of private interest such as conflict of interest, future political ambitions, and interests in the regulated industry.
- vi. **Autonomy from elected politicians:** The extent to which board members are free from the influence of elected politicians.

- vii. **Autonomy from regulators:** The degree of freedom from the influence of the regulated industry.

2.5 Public Interest Theory of Regulation

Public interest theory is a concept in political science and economics that suggests that government policies and actions should be based on the common good rather than serving the interests of a particular group or individual. Though there is no specific point of origin for public interest theory, it can be traced back to Pigou's work (1920), particularly in his *Analysis of Externalities and Welfare Economics*. Public interest theory is also rooted in classical literature (Duke, 2020). For example, in his work, *Politics*, Aristotle explained the nature of the state, justice, and the role of the government in promoting the common good (Duke, 2020). Similarly, John Locke in his *Two Treatises*, discusses the social contract theory and the obligations of government to serve the public interest (Sasan, 2020).

Public interest theory is applied in economic regulation to understand government intervention in the market. The central thesis of the theory is that governments should regulate economic activity in the public's interest. This is because the market cannot always be relied upon to provide goods and services that are in the public's best interest, and government intervention is sometimes necessary to ensure that the public interest is protected, particularly against private interests (Levi-Faur, 2021). Hertog (1999) aptly summarises the central thesis of public interest theory into two main assumptions. First, "unhindered markets often fail because of the problems of monopoly or externalities." Second, "governments are benign and capable of correcting these market failures through regulation." The public interest theory of regulation provides a strong rationale for government intervention in economic activities that affect public health, safety, and welfare. The theory suggests that regulation can help to correct market failures by establishing standards, setting prices, and limiting market power.

Furthermore, the theory suggests that regulation can help redistribute wealth and income, protect the environment, and ensure fair market competition. Thus, the public interest theory of regulation is seen as an essential tool for promoting social justice and economic efficiency.

Critics of the public interest theory, however, argue that regulation can be costly and burdensome and stifle innovation and economic growth (Posner, 1978). In addition, some say that regulation can be captured by the industries it is meant to regulate, leading to regulatory capture and the formation of regulatory cartels (Peltzman, 1976). As a result, it is difficult to determine the public interest, and government intervention can often lead to unintended consequences. Posner suggests that public interest is an “ambiguous concept” that can be used to justify a wide range of government interventions, many of which may be harmful to economic growth and individual freedom. He, therefore, argues that markets are generally efficient and that government intervention should be limited to cases where there is an apparent market failure.

Despite these criticisms, the public interest theory of regulation continues to be an essential framework for understanding the role of regulation in modern society. By focusing on the broader interests of society rather than the narrow interests of specific groups or individuals, the public interest theory provides a compelling rationale for regulating economic activity. For example, during the early stages of regulatory reforms in Ghana, within the context of public interest theory, Edjekumhene (2001) investigated the extent to which public interests were considered in Ghana during the reform's efforts. He found that the reform process in the country had implemented sufficient safeguards to mitigate adverse social and environmental impacts. Moreover, opportunities to enhance public benefits have been actively pursued. However, he noted that the primary challenge identified by regulators was the delicate balance

between raising tariffs to economically viable levels and ensuring affordable power for impoverished urban and rural consumers.

2.6 Capture Theory of Regulation

The capture theory of regulation has its assumptions grounded in the broad notions of the public choice theory, which asserts that all people, be they politicians, bureaucrats and, in particular, regulatory agencies, act rationally to maximise their self-interest rather than the general interest (Buchanan & Tullock, 1962). In the regulation arena, the capture theory emerged as part of the set of economic theories of regulation developed in the 1960s in reaction to the critical assumptions of the public interest theory. These scholars, particularly those from the Chicago School of Law and Economics, challenged the public interest theorists' assumption of benevolent regulatory commissions and the justifications for government interventions in the market. In particular, in contrast to public interest theorists' claims that government regulation is necessary to address market imperfections and protect the interests of the general public from powerful interest groups, capture theorists contend that regulators have private interests and prioritise these over the public interest (Stigler, 1971).

According to Hertog (1999), three critical intellectual debates support the criticisms of the public choice regulation theory. First, "markets and private orderings" can resolve most market failures without government regulation or intervention. Second, even when market imperfections exist, conflicts can be resolved through private litigations in court. Third, government regulators are often incompetent, corrupt, and captured, and as a result, regulation may exacerbate the problems it aims to solve.

One notable perspective in the public choice theory of regulation is the capture theory of regulation (private interest theory) (Peltzman, 1976), which argues that various interest groups

see economic rents as “up for grabs” and vie for them by trying to control the regulatory process (Stigler, 1971; Posner, 1978).

Heims and Moxon (2024) noted that regulatory agencies often face criticism for their susceptibility to regulatory capture which refers to the phenomenon where special interests unduly influence regulation, compromising the government's ability to serve the public interest. While the literature has identified various potential causes of capture, such as the "revolving door" phenomenon and industry funding of regulatory agencies, the actual mechanisms of capture remain poorly understood. These potential causes are often mistakenly equated with regulatory capture itself. The empirical and theoretical understanding of what occurs within the regulatory process that enables industry to exert influence remains unclear, representing a significant knowledge gap.

Regulatory capture is a significant concern in governance, where regulatory agencies created to serve the public interest, end up advancing the interests of the industries they regulate instead. This can occur due to various factors, comprising lack of public participation and engagement; insufficient transparency in the regulatory process; unequal access to information, favouring industry stakeholders; and the regulated industry's significant economic influence (Prihandono, & Widiati, 2023).

Thus, regulatory agencies cannot pursue the public interest because small but powerful or privileged interest groups manage to capture regulatory rule-makers (legislators or regulatory agencies) to extend or expand regulation in their favour (Levi-Faur, 2021). Initially, the regulatory capture theory was coined to explain the final stage of the institutional lifecycle of regulatory agencies where, as a result of decreased public interest and government support, regulatory agencies are compelled to do the biddings of the regulated agencies to continue to stay relevant or to avoid being dismissed (Levi-Faur, 2021).

However, in modern times, the capture theory conveys similar notions of private interest with propositions that question the neutrality of regulatory agencies. The central idea is that self-interested regulatory actors have substantial rewards in view not only by giving in to pressure groups but also by expanding regulation. Consequently, there is nothing like good regulation, because if private interests do not hold up politicians, they capture self-serving bureaucrats. In addition, the regulatory agencies' officials also have personal interests grounded in their desire for future careers or positions in government or the regulated industry. This makes them susceptible to the influences of government officials or the regulated bodies. Similarly, the private interests of regulatory agencies may manifest in their quest to expand their autonomy (financial, legal or managerial).

Unfortunately, the assumptions of the capture theory, as in the public choice theory in general, have been criticised on the following grounds. First of all, at the theoretical level, their confidence in private ordering and the benevolence or trust in the courts as offering better safeguards in the economy than regulators are excessive. This is because private orderings and court interventions do not always produce the intended desires. In addition, there is evidence to prove that courts have been inefficient and corrupt at times (Johnson et al., 2002). Besides, as argued by Christensen (2011), the legislature that enacts regulatory policies, the executive that implements regulatory guidelines, and the courts that monitor regulatory actions are all government institutions. As a result, the argument by public choice theorists that governments are not fit for regulation because they are corrupt is flawed.

Notwithstanding these shortcomings, the literature on the capture theory of regulation is undoubtedly beneficial. The theory highlights the importance of understanding the incentives and interests that drive regulatory decision-making and suggests that regulatory policies should be designed with these factors in mind. For example, Chandranegara and Marfungah (2024)

argue that regulatory capture has undermined Indonesia's emergency law-making during COVID-19, marked by opaque and hasty processes, minimal public participation, and constitutional violations, as seen in cases like the Mining Act and Job Creation Act of 2020.

Prihandono & Widiati (2023) analysis leads to the conclusion that there are apparent signs of political influence in the coal-fired power plant industry in Indonesia, indicating the existence of regulatory capture. As such, measures to prevent and eradicate regulatory capture should be implemented by the government. For example, Adler and Posner (2001) argued that the political process may lead to inefficient regulation of environmental issues, as politicians and regulators may prioritise short-term political gains over long-term ecological benefits.

For example, regulatory capture theory provided the lens to empirically examine the 2014 Mount Polley mining disaster in British Columbia, Canada (Edwards, 2021). In that study, regulatory capture was associated with deficiencies in inspection, compliance, and enforcement standards, leading to Canada's most significant environmental catastrophe.

Similarly, more recently, Crawford and Burnett (2020) examined the impact of regulatory capture on the public interest theory of regulation in the Australian energy market and reported that regulatory capture could undermine the theory, leading to outcomes that favour industry interests over public interest.

In conclusion, despite the key difference between the public interest and capture theories of regulation, they converge at a point. Firstly, they both examine the role of government intervention in regulating industries. Secondly, they are both concerned with market failures. Thus, they both recognise that market failures can occur, leading to the need for regulation. Finally, they both emphasise protection. Thus, both theories aim to protect consumers, workers, the environment, the regulated industry or the general public from harm. When regulatory capture happens, it can lead to policies that benefit special interests rather than the broader

public. This phenomenon can undermine trust in government and regulatory agencies, ultimately affecting the effectiveness of regulations and the well-being of society.

Therefore, in the current study, the capture theory is chosen in the context of public choice theory to analyse whether PURC has provided regulatory credibility to its stakeholders. Instead of pursuing public interests, PURC pursues private interests, including its interests and the bidding of powerful interest groups and politicians.

2.7 The Credible Commitment Theory

Conceptually, credible commitment is a cornerstone concept in various fields like economics, political science, and organisational behaviour. It refers to actions or mechanisms that signal a party's genuine intentions and ability to uphold agreements or policies over time, thereby building trust and reducing uncertainty. Theoretically, its roots can be traced to the game theory and contract theory, particularly Thomas Schelling's (1960) seminal work on strategic interaction, highlighting the significance of commitments in shaping behaviour and outcomes in social interactions. In other words, credible commitment emphasises the role of signalling and enforcement mechanisms in fostering trust and cooperation.

In the regulation field, the credible commitment theory is pivotal for understanding the complexities associated with delegating regulatory functions to independent regulatory agencies and the credibility of regulatory policies. The theory has developed over the years with the impetus to understand the reasons for the proliferation of independent regulatory agencies across the globe (Jordana & Levi-Faur, 2005). Principal-agent models suggest that control measures are implemented to mitigate moral hazard issues when delegation occurs. However, creating Independent Regulatory Agencies (IRAs) introduces a paradox to these predictions, as politicians delegate regulatory authority to agencies designed to diminish political influence over regulatory policy. Gilardi (2008) underscores the need to explain why

politicians delegate regulatory responsibilities and opt for an "independent" agent. The formal independence levels of regulators are often interpreted as a solution to credible commitment problems. By entrusting regulatory duties to agencies structured to shield them from political pressures, elected officials aim to lend credibility to their policies, fostering investor confidence and encouraging participation in national markets.

The main idea of the regulatory commitment theory is that governments, particularly elected politicians, sometimes struggle to stick to their initial policy decisions because they have enormous discretion when making policy decisions (Ennsner-Jededastik, 2015). This makes it hard for stakeholders, like investors and consumers, to trust that the government will follow through on what they say. However, there are times when governments want to seem credible or trustworthy to attract investors. Even though they may not always do this because they genuinely want to, they put measures in place to ensure they do not break their promises. According to Enneser-Jedidasktik (2015, p. 508), if governments cannot be trusted to keep their promises because they genuinely want to ('motivational credibility'), they do it by setting limits on their own "discretion to change from their earlier stated policy." Credible commitment is how they make sure this happens.

In short, politicians create Independent Regulatory Agencies (IRAs) because they want to be seen as credible in their policy decisions. However, because they know they might not always do this just because they want to, they put in place self-binding institutional and legal mechanisms to stop themselves from getting involved in what IRAs do. The work of scholars such as Majone (1994, 1997; Gilardi, 2002, 2011) has contributed keenly to the development of the credible commitment theory of regulation.

So far, there is a ton of empirical literature to support the credible commitment theory and its relevance in explaining the credibility of regulatory policies and actions and the level of formal

independence granted to IRAs across the globe. For example, Gilardi found that in Europe, agencies are more likely to be highly independent in sectors recently privatised and liberalised (Gilardi, 2002). Utility regulators, especially, are more independent than regulators in other economic areas (Gilardi 2011, 2008). Jordana and Levi-Faur (2005) also showed that privatisation in Latin America positively influences the creation of supposedly independent regulatory agencies. In simple terms, there is a connection between how independent agencies are and the privatisation process, with utility regulators expected to have higher independence.

Despite the extensive support for the theory, there may be some variabilities in the developing contexts. For example, Mediano (2020) examined why regulatory agencies in Latin America have varying levels of independence, exploring functional and institutional explanations. The research was based on an original database covering 104 regulators in 8 countries and 13 sectors. Contrary to a critical idea in the credible commitment theory, the findings suggest that privatisation does not significantly determine agency independence, and utility regulators are less likely to be independent than other economic regulators. The study reveals a positive correlation between veto players and formal independence, indicating that in developing countries, they work as mechanisms to enhance credibility rather than functioning equivalently, as seen in studies on developed countries. Additionally, the research shows a positive link between democratisation and formal independence, while trade opening and vulnerability to international pressures do not seem to have a notable impact.

Again, Mueller & Pereira (2020) argued that the government must create regulatory institutions that credibly protect investors while balancing agency autonomy with control, and our model explains how Brazil's regulatory design reflects this trade-off. We contend that in Brazil, the balance between agency credibility and government control is crucial for understanding the design of regulatory institutions. According to Alon-Barkat and Busuioc (2024), delegating

power to independent agencies is a key strategy for demonstrating credible regulatory policies. By shielding agencies from direct political influence, governments can ensure consistent and reliable regulatory decisions thereby boosting policy credibility. However, their research suggests that agency independence, while essential, is only a partial solution, as it can improve stakeholders' perception of credibility but cannot fully offset the negative impact of preconceived notions.

2.8 Nexus of Public Interest, Capture, and Credible Commitment Theories

This section applies the three theories to achieve this study's objectives, explaining their utilization in the process. It begins with a conjecture about the nature of the synergistic interaction of public interest theory and capture theory. With the support of credible commitment theory, these theories help explain the concepts of regulatory responsiveness and credibility.

This conjecture begins from the well-established assumption in the public interest perspective that regulatory institutions should be designed with the ultimate goal of enhancing public interest and welfare. Also, from regulatory capture theory, the study acknowledges that regulatory capture and political interference can significantly affect the quality of regulatory governance, particularly when regulatory agencies are captured or politically influenced. Consequently, to effectively achieve the public interest regulatory goals, it is essential to consider robust institutional qualities and mechanisms such as independence, accountability, and transparency when designing regulatory institutions. This measure is expected to guard against regulatory capture and political interference. In this regard, the study follows the findings of authors such as Levi-Faur (2011, 2017) and Levy and Spiller (1994) that the establishment of independent regulatory agencies provides an opportunity to design such a robust regulatory regime that can regulate the interest of the public while preventing regulatory capture and political interference.

Additionally, at the same time, from the regulatory capture point of view, the study follows the argument of Cetin (2011) and suggests that the pursuit of public interest in regulation could only be achieved sustainably if, apart from seeking public interest, regulatory actors put into the regulatory system, incentives that would attract investors in the regulatory space while giving them enough reasons to continue to stay in operation. In this regard, the study follows the concept of credible commitment, which argues that political officers and, of course, regulatory agencies could win the confidence and trust (regulatory credibility) of investors, mainly regulated bodies if they could assure them that they would always refrain from discretionarily altering their previously proposed policy objectives (Majone, 1997). At the same time, regulatory actors will continue to enjoy the support of the public and even the regulators if they can continuously provide higher regulatory responsiveness to their stakeholders. Therefore, continuous responsiveness will lead to regulatory credibility (Abbott & Snidal, 2013).

In addition, these propositions are made not without the mindfulness of the impact of political and environmental contexts in which regulatory actors operate. As noted by Levy and Spiller (1994), regulatory governance quality is affected by the institutional endowment of the country, including how government institutions are arranged; specifically, whether and how they are divided (with checks and balances) or fused (with collective responsibility). They argue that the institutional endowment of a country includes the five elements of the legislative and executive system, judicial system, administrative system, informal rules, and country-specific social and ideological characteristics (Levy & Spiller, 1994). Thus, a political institutional arrangement in which the legislative arm is independent enough to pass legislation and to hold the executive class, including regulatory agencies, accountable for their actions will promote a more quality regulatory environment. This is equally true if an independent judiciary checks

and reviews the legislation of the legislature, the executive branch, and independent regulatory agencies (Cetin, 2011).

Again, it is further proposed that independent regulatory agencies will be more effective if they have the support of the public and political executives. As indicated earlier, this support is to be demonstrated through high regulatory credibility. This is because, it is possible to create an independent regulatory agency only in name, as observed in some countries such as Greece and Turkey (Reel, 2014). Thus, the mere establishment of IRAs without the government's commitment to independence and capacity (expertise, budget, legislation) might justly be interpreted as a fruitless journey.

Following this conjecture, the study sought to achieve the research objectives in the following manner. Firstly, the public interest theory was utilised to analyse the extent to which the design of PURC serves the broader public interest. The public interest theory suggests that regulatory agencies are established to protect the public interest by ensuring fair competition, preventing market failures, and promoting efficiency (Stigler, 1971; Levi-Faur, 2021). To achieve this, the institutional design and legal framework of PURC were examined and compared against the principles of the public interest theory. Specifically, the study looked for evidence of autonomy and transparency in decision-making processes and whether the institutional design and legal framework make PURC autonomous and transparent in its regulatory activities.

Secondly, to achieve the second research objective, the capture theory of regulation was used to explore instances where instead of pursuing the general interest of its stakeholders, PURC's decisions aligned closely with the preferences of the industries it regulates or the biddings of influential businesses and interest groups. Specifically, the researcher looked for evidence of a revolving door phenomenon where individuals moved between the regulatory agency and the regulated industries, potentially influencing decision-making in favour of industry interests or

the interest of powerful interest groups. The study also investigated whether the design and legal framework of PURC encourages regulatory actions that are responsive to the needs of stakeholders. Burman and Zaveri (2017) reported that regulatory agencies can respond to the needs of their stakeholders if the laws are flexible enough.

Thirdly, the final objective, which seeks to analyse the regulatory credibility provided by PURC to its stakeholders in Ghana's electricity and urban water sectors, was achieved by following a nexus of the public interest and capture theories and the credible commitment perspective. Specifically, the study examined cases where regulatory decisions may have enhanced or battered PURC's credibility. This included looking for instances where PURC demonstrated resilience against capture pressures and acted in the broader public interest rather than the interests of elected politicians, the regulated industry, and influential businesses and interest groups. It also included finding out how the institutional design, as per the public interest theory and credible commitment, contributes to or hinders PURC's regulatory credibility in terms of predictable time-consistencies in policies and actions. It again considered how the institutional design, as per the public interest theory and credible commitment perspective, actually provided safeguards for PURC against the interference of elected politicians in regulatory activities.

In addition to these theories, credible commitment is used to support the theories and provide further perspectives on the research objectives. Credible commitment is crucial in regulatory governance as it refers to the ability of a regulatory agency to make and enforce decisions in a way that assures stakeholders, both industry and the public, that these decisions will be upheld over time (Enneser-Jedidasktik (2015, p. 508): Levi-Faur, 2005). Precisely, in the first objective, the credible commitment was used to examine how the institutional design of PURC contributes to credible commitment elements such as the legal framework, tenure and

autonomy of regulatory officials, as well as the agency's enforcement capabilities (Joskow, 2007).

Additionally, the credible commitment concept was used to assess whether regulatory decisions are consistently implemented and enforced over time, signalling a commitment to regulatory policies (Majone, 1996). The study considered how credible commitment influences the overall regulatory credibility of PURC. Specifically, the study analysed cases where the agency's commitment to its decisions has positively or negatively affected its credibility in the eyes of stakeholders (Alon-Barkat and Busuioc (2024); Levi-Faur, 2005).

Finally, integrating public interest theory, regulatory capture theory, the credible commitment perspective, and the concept of regulatory responsiveness helped to analyse how the regulatory framework and decision-making processes of PURC contribute to building trust and confidence among stakeholders, which is essential for effective regulatory governance.

2.9 Empirical Perspectives

This section synthesises empirical studies on institutional design and regulatory governance quality, responsiveness, and credibility.

2.9.1 Institutional Design of Independent Regulatory Agencies (IRAs) and Regulatory Governance Quality

Many studies support the argument that institutional structures and attributes that give substantial autonomy and transparency to regulatory agencies can improve the quality of regulatory governance. For example, Maggetti (2009) conducted a systematic study of the impact of IRAs on decision-making in three European countries (Netherlands et al.). The findings show that IRAs play crucial roles in all regulatory policy-making processes, including agenda setting, pre-parliamentary discussions, and the implementation phase. In addition, the

study found that the de facto independence of IRAs from political decision-makers is a necessary condition for this outcome.

Similarly, Bartelli and Whiteford (2009) explored elite perspectives on regulatory quality and the autonomy of regulators within the country's political framework. They argue that perceptions of regulatory quality significantly impact market operations, and independent regulators contribute to positive elite perceptions by overseeing actors within domestic political systems. This cross-national statistical data indicates that regulatory autonomy is associated with favourable elite perceptions of regulatory quality. Furthermore, the authors offer evidence that regulatory autonomy is more prevalent in scenarios where political competition influences incentives to intervene in business markets.

These two studies emphasise the crucial roles of independent regulatory agencies in regulatory policies. IRAs in regulatory policy reforms also legitimise the government's regulatory policies. For example, according to a study by Levi-Faur (2011), independent regulatory agencies can positively impact the quality of regulatory governance in several ways. First, they can enhance regulatory legitimacy by providing a neutral and impartial regulatory process that all stakeholders perceive as fair. Second, they can improve regulatory effectiveness by allowing regulators to focus on technical and policy issues rather than political considerations. Third, they can increase regulatory accountability by providing a clear line of responsibility for regulatory decisions and actions.

The literature shows that the independence of IRAs largely depends on the quality of regulatory institutions. Thus, the nature of institutional design significantly affects the autonomy and transparency of the regulatory body. For example, Erdogdu (2013) studied fifty-one (51) states in the United States, thirteen (13) provinces in Canada, and fifty-one (51) other countries. The

results showed the importance of better institutions in explaining why some countries can implement more extensive electricity and regulatory reforms.

This finding suggests the need for coherence in regulatory reforms. For example, Mathieu (2023) suggests that there is a need for complementarity between policy objectives, instruments, overall political contexts, and the nature of the institutional endowment of the specific country. Therefore, any analysis of the performance of IRAs must also consider the quality of their institutional and legal design and the nature of the political contexts in which they operate.

Vennemo and Søreide (2015) examined the institutional arrangements for regulating electricity and water sectors across eighty-five (85) countries, using data from a global survey of regulatory agencies. The study found that institutional arrangements for regulation in the electricity and water sectors are highly varied across countries, with significant differences in the autonomy of regulatory agencies, the scope of regulatory authority, and the degree of political interference in regulatory decisions. The authors also found that institutional arrangements are strongly correlated with the quality of regulatory governance, as measured by a composite indicator based on transparency, accountability, and effectiveness.

Regulatory autonomy is another crucial factor in assessing the quality of IRAs' regulatory governance. Thus, IRAs require enough independence from the regulatees and elected politicians to make effective decisions. For example, Koop and Hanretty (2017) investigated the link by employing a thorough gauge of the quality of work conducted by competition authorities in thirty (30) countries that are part of the Organisation for Economic Cooperation and Development (OECD), along with new data on the structure of these organisations. Their findings indicate that having formal independence positively and significantly impacts the

quality of regulation. Surprisingly, the study discovered that formal political accountability does not enhance regulatory quality, suggesting the critical role of regulatory independence.

Another key ingredient of quality institutional design is transparency. It stands as another crucial measure to enhance effective regulatory governance. Empirical studies have shown that IRAs which provide clear and transparent information to stakeholders are more effective in promoting accountability and promoting the public interest. For example, Dudley and Wegrich (2016) compared the transparency of the US and EU regulatory regimes. They reported that regulatory practices, such as transparency, public consultation, and Regulator Impact Analysis (RIA), are essential to the overall legitimacy and ultimate acceptance of regulatory law. The study also discovered that regulatory agencies, particularly those in the health sector, are often accused of lacking transparency and failing to disclose the key inputs that shape their regulatory decisions in both contexts.

In conclusion, the empirical literature supports using IRAs in regulatory settings. However, some factors affect the effectiveness of IRAs in achieving public interest.

2.9.2 Regulatory governance effectiveness and regulatory responsiveness

As explained earlier, regulatory governance refers to the mechanisms, processes, and institutions through which regulations are designed, implemented, and enforced. The quality of regulatory governance can significantly impact regulatory responsiveness, which, in this context, is the ability of regulatory bodies to quickly and effectively respond to changes in the market, technology, or social dynamics.

The essence of regulatory responsiveness emanates from the realisation by researchers that, the conventional approaches to electricity sector regulation prove inadequate in addressing contemporary opportunities and challenges. Consequently, many jurisdictions and regions have adopted more adaptable, cooperative, deliberative, and inclusive governance approaches

that encourage diverse stakeholders to collaborate in addressing emerging issues and coordinating policy domains. As a result, regulatory governance is beginning to tilt towards concepts rooted in the theories of deliberative democracy. John Braithewaite, for example, talks about responsive regulation, which connotes the flexibility and adaptability of regulatory regimes that allow for stakeholder participation and innovative approaches to regulation. Though regulatory responsiveness portrays a similar conceptual overview, the two are slightly different in approach.

Regulatory responsiveness finds its conceptual roots in theories of deliberative democracy in political science, and it involves flexible procedures, effective communication, participatory rule-making through broad stakeholder engagement, and timeliness in responding to stakeholder concerns (Malesky & Tausig, 2017).

Though empirical studies on responsive regulation in the utility sector are relatively limited, existing literature has reported that regulatory responsiveness is crucial for regulatory governance. For example, Bel and Fageda (2009) examined the impact of regulatory reforms in the water sector in Spain. They found that introducing responsive regulation strategies, such as performance-based regulation, was associated with improved service quality and increased efficiency. Similarly, Hongn(2018) highlights the need for democratic regulatory responsiveness, emphasising that regulators should be responsive to regulations as well as broader public needs and preferences. According to the study, by responding to the public need, the regulator can win the support and trust of various stakeholders.

Some studies also focused on examining factors that affect regulatory responsiveness. This group of scholars conceptualise responsiveness within the general deliberative democracy theory, emphasising mechanisms that enhance participation and timely response to the needs and interests of stakeholders. In this regard, Burman and Zaveri (2017) analysed the regulatory

responsiveness of some vital regulatory firms in India. The findings show that the degree of responsiveness of IRAs is directly proportional to the legislation that defines the responsiveness processes. This study suggests that responsiveness will be effective if the laws allow flexibility and proactive practices.

Others also recognise the role of stakeholder engagement in enhancing effective regulatory responsiveness and quality of regulatory governance. For example, a study by the Organization for Economic Cooperation and Development (OECD) (2018) found that stakeholder engagement is critical to regulatory effectiveness and can help to build trust and legitimacy in regulatory decision-making.

Similarly, Baldwin (2018) found that recent findings highlight the emergence of collaborative, multi-actor forums designed to facilitate the governance of electricity transmission and state-level clean energy initiatives. These forums provide a platform for stakeholders with diverse interests to collaboratively address political and technical challenges associated with the increased utilisation of renewable and distributed electricity.

Creating responsive regulatory regimes also requires a practical political and institutional context that enhances flexibility and innovative practices. A study by the World Bank (2017) found that, regulatory bodies that operate in a stable political environment are better able to focus on long-term goals and respond promptly to market changes.

Therefore, on this background, this study assumed based on empirical evidence that regulatory responsiveness will require an effective regulatory governance regime that is predicated on the specific environmental contexts, including the country's institutional endowment and the quality of the institutional design (Levy & Spiller, 1994; Gilardi, 2011). This aligns with the findings of Gonzalez & Peci (2024) in the electricity sector of Latin America that, “soft” procedural dispositions play a critical role in perceived quality in the electricity sector (p. 2).

Steinabach (2023) argues that a managerial system, with its inherent flexibility benefits, is better equipped to facilitate the effective execution of regulatory reforms.

In conclusion, the literature suggests that regulatory responsiveness is critical to regulatory governance. By engaging with stakeholders, maintaining flexibility, and operating in a stable political environment and effective institutional design, regulatory bodies can be responsive and ensure that their regulations remain relevant and effective over time.

2.9.3 Regulatory responsiveness and regulatory credibility

As already explained in chapter two, under 2.5.4 (see page 36), regulatory responsiveness refers to the ability of regulatory agencies to adapt and respond to changing circumstances and new challenges. To demonstrate a link between regulatory responsiveness and regulatory credibility, the study draws on the classical ideas of Easton, who proposed that governments that consistently demonstrate responsiveness and compelling performance as perceived by their citizens build a reservoir of goodwill. This reservoir of goodwill enables citizens to more readily accept or tolerate policies with which they may initially disagree (Easton, 1965, p. 273).

Following this idea, Linde and Peters (2020) tested the relationship between responsiveness and responsibility. They found that, governments seen as responsive to immediate citizen demands develop a form of “responsiveness capital.” This capital eventually grants governments the flexibility to make significant decisions that may not be directly responsive to citizen demands, which are more likely to be embraced by the populace. In this manner, government actions prioritising responsiveness allow governments to act responsibly. A responsive regulatory regime is associated with credibility or reputation (Busuioc & Lodge, 2017); thus, regulators build a good reputation and legitimacy when they listen to their stakeholders and make them feel part of the rule-making process.

For example, Black (2008) explores the construction of legitimacy and accountability in polycentric regulatory regimes, emphasising the dynamics of accountability relationships and how regulators respond to multiple legitimacy and accountability claims. Hong (2018) advocates for an expanded concept of regulatory responsiveness, stressing that regulators should be accountable to the general public, not just those being regulated.

Muller and Braun (2021) also studied the relationship between strategic communication as an aspect of responsiveness and credibility of the central bank in the Netherlands. The findings showed that responsiveness through strategic communication significantly enhances reputation or credibility. These findings underscore the relationship between regulatory responsiveness and credibility, a concept that is illuminated by the public interest theory. Therefore, swift responses to public needs and interests are crucial for IRAs to be perceived as credible, much like effective institutional design can foster policy credibility, as noted by Mathieu (2023, p.2).

2.9.4 Institutional Design and Regulatory Credibility

Existing research indicates that independent regulatory agencies (IRAs) with well-designed institutions can yield benefits, particularly in enhancing regulatory credibility (Mathieu, 2023). Stern (2002) highlights the importance of IRAs in achieving credibility and a reputation for economically sound behaviour. Bertelli (2009) demonstrates that regulatory independence supports elite perceptions of high regulatory quality.

They pursue this motivation through the lens of the credible commitment theory, which assumes that elected politicians design regulatory institutions so they cannot interfere in the regulatory process for their private interests or rent-seeking motivations (Gilardi, 2011).

Credible commitment is associated with regulatory independence. As a result, regulatory reforms that receive a limited credible commitment from the elected class struggle to achieve

their regulatory goals. For example, the study by Levy and Spiller (1994) reported that long-term investment will not occur without enough commitment to regulatory credibility.

However, contrary to this finding, Christensen and Yesilkagit (2006) did a comparative study of regulatory reforms in three Western European countries: Denmark, the Netherlands, and Sweden. Their analysis challenged the applicability of functionalist theories of regulatory reform that, governments delegate regulatory power to IRAs rather than traditional administrative structures in exchange for policy credibility. Instead, they advocated for the empirical validity of the politics of structural choice theory. According to their findings, in parliamentary systems akin to those in Europe, policymakers prefer institutional designs that maximise flexibility in delegation yet are consistently within the bounds of their respective national administrative traditions.

This notwithstanding, emerging studies support institutional design and policy credibility within the functionalist perspective. For example, Cambini and Franzi (2013) evaluated the level of independence among regulatory agencies, focusing on three primary dimensions: the regulatory tools available to regulators and their decision-making autonomy, the organisational autonomy of regulators, and regulators' accountability. The results indicate that countries with established independent regulators tend to possess a more credible regulatory framework compared to those lacking such bodies. Specifically, the analysis highlights that Turkey, Croatia, and Jordan have established regulatory frameworks that curtail administrative expropriation, creating an environment conducive to attracting investments in the electricity and renewables sector. This institutional achievement is likely linked to the alignment of regulatory standards driven by the European Union through its neighbouring policy in the case of Jordan and the membership perspective in the cases of Turkey and Croatia.

On the other hand, studies show that institutional design is significantly associated with credible commitment, and without credible commitment, regulatory reforms may lead to political opportunism and institutional challenges. For example, Reel (2014) conducted a comparative study of the Greek and Turkish electricity utility sectors to ascertain whether the government had demonstrated enough credible commitment to their regulatory reforms. The findings showed that despite the reforms and restructurings, the sector is hampered by institutional and political challenges, such as regulatory autonomy, lack of regulatory principles, political opportunism, and weak commitment towards complete regulatory credibility. The study found that, while reforms in the sector had started way back in 2001, it was only in March 2013 that the government of Turkey enacted a law to establish an independent regulatory agency. Conversely, Greece's Regulatory Authority of Energy (RAE), established by law as an independent regulatory agency in 1999, was still struggling with issues of regulatory independence.

Overall, these studies indicate that effective regulatory governance systems (hereafter referred to as those with quality institutional design and attributes such as autonomy and transparency, accountability, and clarity of roles and objectives can contribute to regulatory responsiveness and enhance the perception of regulatory credibility). The findings can be understood from both the credible commitment theory and public interest theory perspectives, indicating that governments create autonomous IRAs to achieve policy credibility by insulating them from political pressure and that IRAs earn credibility by responding to stakeholder needs, but risk losing legitimacy if perceived as unresponsive and unaccountable (Braun & Busuioc, 2020).

2.9.5 Challenges Facing Independent Regulatory Agencies

In the current study, it is recognised that the ability of independent regulatory agencies to deliver regulatory autonomy, regulatory responsiveness, and credibility may be affected by a

slew of challenges identified by researchers as hindrances to the performance of IRAs across the globe.

These challenges include political interference, regulatory enforcement, information overload, skill shortage, outdated laws, regulatory capture, and systemic threats. For example, Shapiro et al. (2009) explored the challenges facing five regulatory agencies in the United States. They identified four key challenges: severe shortfalls in funding, outdated authorising statutes, political interference, and an ageing, demoralised civil service.

Stigler (1971) found that regulatory capture was common in industries heavily regulated by IRAs. Similarly, Bhaskar (2018) identified issues such as capture, commitment, communication, and accountability in India.

Moreover, the quality of regulatory governance is also affected by the nature of the institutional endowment of the country where the regulatory agency operates. For example, Levy and Spiller (1994) conducted a comparative study of the regulatory governance in the telecommunications utility sectors in Argentina, Chile, Jamaica, the Philippines, and the United Kingdom. The findings showed that the success of a regulatory system depends on how well it fits with a country's prevailing institutions. If a country lacks the requisite institutions or erects a regulatory system that is incompatible with its institutional endowment, efforts at privatisation may end in disappointment, recrimination, and the resurgence of demands for renationalisation (Levy and Spiller (1994) p. 242).

Political interference poses a significant threat to the independence and efficacy of IRAs. For example, a study by Baldwin and Cave (1999) found that IRAs in some countries faced significant political interference, which resulted in poor regulatory outcomes. The issue of political interference has been emphasised as the most widespread issue regulatory agencies face. Silva (2023) studied the regulatory regime of Brazil and identified two main incentives

for the presidents' interference in the affairs of regulatory bodies even after delegation. He listed two key reasons presidents interfere in the work of regulatory bodies; first is the need to implement popular policies and second is the need to avoid conflicts between regulatory policies and other macroeconomic and social policies managed by the government. Thus, presidents feel they are electorally accountable to the people and must intervene in the economy.

2.9.6 Summary of Empirical Review

The empirical review presented a synthesis of the empirical literature on the regulatory governance of IRAs, regulatory responsiveness, and credible regulation. To a large extent, the review showed significant support for the above propositions. First, public interest is the dominant reason for regulatory reforms and policies. Second, there is enough evidence to show that regulatory capture and political interference are key regulatory governance challenges. As a consequence, governments often choose institutional designs that better help to promote public interest. Third, the most widely accepted institutional design for resolving regulatory capture and political interference challenges is the establishment of independent regulatory agencies.

It was also found that political officers usually choose IRAs due to their search for regulatory credibility. The review also shows that regulatory credibility is attained through credible commitment. The empirical review supports the propositions that;

- i. There is a relationship between regulatory governance quality, regulatory responsiveness, and regulatory credibility.
- ii. The nature of the relationship is such that high-quality regulatory governance is associated with regulatory responsiveness. Specifically, regulatory governance quality can be achieved through regulatory responsiveness.

- iii. A high level of regulatory responsiveness will enhance a high level of regulatory credibility.

Finally, the review shows that regulatory reforms are affected by the political, social, and economic environment. Put more accurately, the country's political and environmental institutions affect the quality of regulatory governance and responsiveness.

2.10 Conceptual Framework

The conceptual framework explores the impact of PURC's regulatory governance quality on its regulatory responsiveness and credibility in the urban water and electricity utility sectors. It suggests that regulatory governance quality has a direct impact on these.

Regulatory governance quality refers to regulatory institutions' autonomy, transparency, accountability, and fairness in setting and enforcing regulatory policies. It includes regulatory independence, accountability, transparency, and clarity of roles and objectives. According to the review, this can be achieved through regulatory responsiveness.

Regulatory responsiveness refers to the ability of the regulatory authority to adapt to changing market conditions, consumer preferences, and technological advancements. It includes flexibility, quality of stakeholder engagement, effective communication, and timeliness. Regulatory responsiveness will, in turn, lead to regulatory credibility.

Regulatory credibility refers to the perceived legitimacy, expertise, and trustworthiness of the regulatory institution among the stakeholders, including consumers, investors, and policymakers.

The empirical literature suggests a strong positive relationship exists between regulatory governance quality, responsiveness, and credibility. Good regulatory governance enhances the ability of regulatory institutions to respond to the changing needs of consumers and investors,

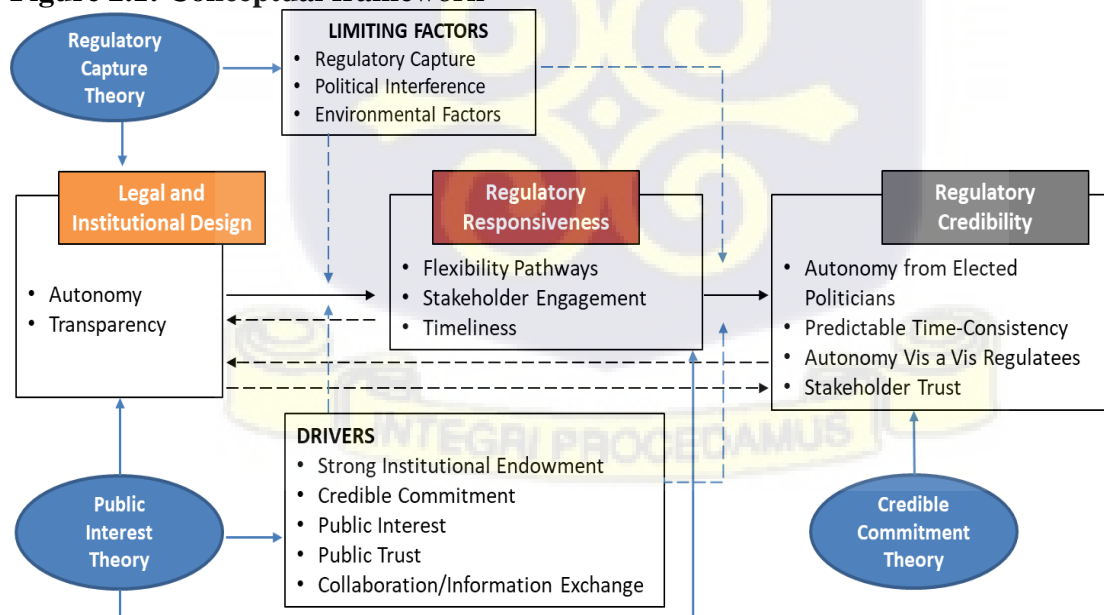
improving regulatory credibility. From the credible commitment and gentrification literature, regulatory credibility has the following attributes: independence from elected politicians, predictable time-consistency of decisions and policies, the status of board members, and autonomy vis a vis as the regulators (Maggetti, 2010).

The conceptual framework also suggests that drivers such as public support, credible commitment, public interest motives, and institutional endowment determine the effectiveness of regulatory agencies in responding to their stakeholders.

Unfortunately, the effectiveness of IRAs in responding to its stakeholders is hampered by factors such as regulatory capture and political interference.

Regulatory governance, responsiveness, and credibility are essential for ensuring reliable, affordable, and sustainable water and electricity utility services. The conceptual framework suggests that improving the quality of regulatory governance can enhance regulatory responsiveness, which will, in effect, enhance regulatory credibility for stakeholders.

Figure 2.1: Conceptual framework



Source: Author's construct based on existing literature (2023)

2.10.1 Conceptual Definitions of Items in the Conceptual Framework

The conceptual framework presented in the study outlines five components that were utilised to analyse whether PURC can provide regulatory responsiveness and regulatory credibility for its stakeholders. The implementation of each element in practice is influenced by various theoretical explanations relating to establishing independent regulatory agencies, improving regulatory governance quality, and enhancing regulatory credibility through responsiveness. It is important to note that these elements do not operate independently in determining the regulatory governance credibility of IRAs. The following two sub-sections of the chapter provide a detailed explanation of the definitions of these terms.

2.10.2 Regulatory Autonomy

Regulatory Autonomy refers to the ability of a regulatory agency to make decisions free from undue influence or interference from political, industrial, or other external actors (Levi-Faur, 2011). It includes financial autonomy, structural autonomy, legal autonomy, and managerial autonomy. It is a critical aspect of effective regulation because it ensures that regulatory decisions are made based on objective criteria and in the public interest rather than being swayed by external pressures.

Measurement of regulatory autonomy can be challenging, but some commonly used indicators include the level of political influence on regulatory decision-making, the level of funding autonomy for the regulatory agency, and the extent to which the regulatory agency's decisions are subject to appeal or overruling by political authorities (Levi-Faur, 2011). Additionally, the presence of legally mandated safeguards, such as fixed terms for regulatory officials, can also be used as an indicator of regulatory autonomy (Stern & Holder, 1999).

However, there is also debate over how much autonomy regulatory agencies should have, with some arguing that too much independence can lead to a lack of accountability and transparency (Majone, 1997).

Regulatory autonomy is a complex and multifaceted concept critical to effective regulation. While measuring regulatory autonomy is challenging, indicators such as managerial autonomy, political influence, funding autonomy, and legal safeguards can provide useful insights into how regulatory agencies can make decisions free from external pressures (Verhoest et al., 2004).

2.10.3 Transparency

Regulatory transparency refers to the extent to which regulatory processes, decisions, and information are accessible, understandable, and open to public scrutiny. It is a key component of good governance and can contribute to regulatory regimes' legitimacy, effectiveness, and accountability (Stern & Holder, 1999; Jarvis & Savacool, 2011).

Regulatory transparency has several dimensions that can be measured, including the availability of information, the quality of information, the accessibility of information, and the degree of public participation in regulatory decision-making.

Some of the common indicators used to measure regulatory transparency include the number and type of regulatory documents made public, the timeliness of their release, the comprehensiveness and clarity of the information provided, and the opportunities for stakeholder engagement in the regulatory process (OECD, 2012; UN, 2017).

One way to measure regulatory transparency is through transparency indices, which assess the level of transparency across a range of policy areas and countries (Balla & Lodge, 2013). Examples of such indices include the World Justice Project Rule of Law Index, the Open

Government Partnership Index, and the Global Right to Information Index. These indices typically use a combination of expert assessments, stakeholder surveys, and qualitative survey data to evaluate the transparency of regulatory regimes (Kaufmann et al., 2011).

Another approach to measuring regulatory transparency is through case studies and qualitative research that examine the transparency of specific regulatory processes or decisions (Balla & Lodge, 2013; Mendes, 2011). These studies can provide more detailed insights into the factors that contribute to or hinder regulatory transparency and the impacts of transparency on regulatory outcomes and stakeholder perceptions.

2.10.4 Flexibility

Regulatory flexibility is a critical aspect of contemporary governance structures. It enables regulatory frameworks to adapt to evolving societal needs, technological advancements, and economic dynamics. It involves the capacity of regulatory systems to be responsive, adaptive, and innovative while maintaining their core objectives.

Hood's (1986) concept of "steering at a distance" highlights the importance of flexibility in regulatory design. Flexibility allows regulators to guide behaviour without unnecessary constraints.

The benefits of regulatory flexibility are evident. In the environmental sector, a study by Decker and Flynn (2017) found that firms operating under flexible regulatory conditions demonstrated higher levels of compliance due to the adaptability of regulations to specific industry contexts. Similarly, Merton and Perold (1993) explored the effectiveness of flexible regulatory frameworks in adapting to changes in market conditions. Their study demonstrated that regulatory flexibility enabled a more effective response to financial market dynamics, contributing to overall stability. In the healthcare context, Williams et al. (2019) examined the impact of flexible regulations on adopting innovative medical technologies. Their findings

indicated that regulatory flexibility was positively associated with the timely adoption of new medical technologies.

Notwithstanding these benefits, challenges persist. For example, Ayres and Braithwaite (1992) highlighted the potential for regulatory capture and the need to balance flexibility and enforcement. Striking this balance is important to prevent undue industry influence without compromising regulations' adaptability.

2.10.5 Stakeholder Engagement

Regulatory stakeholder engagement is the process by which regulatory agencies interact and communicate with various stakeholders, including industry representatives, consumers, advocates, NGOs, and other interested parties, to gather input and feedback on proposed regulations or other regulatory initiatives (Alemanno, 2015). Scholars have proposed various ways to measure regulatory stakeholder engagement (O’Riordan & Fairbrass, 2014; Camilleri, 2015), including;

- i. Frequency of engagement: This refers to the number of times regulatory agencies engage with stakeholders, such as through meetings, consultations, or public comment periods.
- ii. Quality of engagement: This refers to how regulatory agencies listen to and incorporate stakeholder feedback into their decision-making processes.
- iii. Diversity of engagement: This refers to the stakeholders involved in the engagement process, including different industries, consumer groups, and other interested parties.
- iv. Transparency of engagement: This refers to the extent to which regulatory agencies are open and honest about their engagement processes, including disclosing meeting agendas and minutes and providing opportunities for public comment.

2.10.5.1. Communication

Regulatory communication involves exchanging information between regulatory agencies and stakeholders to manage and enforce regulatory policies and standards. This can include communication between regulatory agencies and industry, advocacy groups, and the general public. Effective regulatory communication ensures compliance with regulations, builds trust and transparency, and promotes public health and safety.

There are various ways to measure regulatory communication, including:

- i. Frequency of communication: This refers to the number of interactions between regulatory agencies and stakeholders, such as meetings, emails, phone calls, and public hearings.
- ii. Quality of communication: This refers to the effectiveness of the communication, such as whether stakeholders understand the regulatory requirements and the agency's rationale for its decisions.
- iii. Satisfaction with communication: This refers to stakeholders' perceptions of the communication process, such as whether they feel listened to and valued.
- iv. Outcomes of communication: This refers to the impact of the communication on stakeholder behaviour, such as compliance with regulations, adoption of best practices, and reduction in public health risks.

2.10.6 Timeliness

Regulatory timeliness refers to the ability of regulatory agencies to deliver decisions within a specified time frame, as outlined in their statutory mandates and regulations (Bartley, 2013; Lodge, 2012). The timely delivery of regulatory decisions is crucial for maintaining public confidence in regulatory agencies, promoting economic growth, and ensuring regulatory compliance (Alemanno & Fiorini, 2013; Sager, 2013).

One way to measure regulatory timeliness is through time-based performance metrics. These metrics include the percentage of applications processed within a specific time frame, the average time taken to process an application, and the number of applications processed beyond their regulatory deadlines (Makarov et al., 2008; Lodge, 2012).

Another way to measure regulatory timeliness is through stakeholder satisfaction surveys. These surveys assess stakeholder perceptions of the timeliness and quality of regulatory decision-making processes (Bartley, 2013; Sager, 2013). Stakeholder satisfaction surveys can be conducted among regulated entities, consumers, and other interested parties to gather feedback on the regulatory agency's performance.

Researchers have discussed the role of regulatory timeliness in enhancing regulatory legitimacy and accountability. They argue that timely decision-making processes can help build public trust in regulatory agencies and enhance their credibility and legitimacy (Holm & Zaman, 2012). Elsevier Sager (2013) also emphasises the importance of regulatory timeliness, noting that it is a key factor in promoting regulatory compliance and reducing the regulatory burden on regulated entities.

Generally, regulatory timeliness is a critical aspect of regulatory performance, and its measurement and improvement should be a key priority for regulatory agencies. By adopting effective time-based performance metrics and stakeholder satisfaction surveys, regulatory agencies can monitor their timeliness and identify areas for improvement, ultimately enhancing their regulatory effectiveness and legitimacy.

2.10.7 Indicators for Assessing Regulatory Credibility

Regulatory credibility refers to stakeholders' perception of the trustworthiness or reputation of the regulatory actors. In measuring regulatory credibility, the current study follows Maggetti's (2010) study: *Are Regulatory Agencies Delivering What They Promise?* This is because, as he

rightly noted, it is excruciatingly difficult to measure the performance of IRAs. He further notes that regulatory governance quality has mostly been analysed by processes rather than outcomes. He, therefore, proposes an alternative method: the reputation of the regulatory regarding its credibility and efficiency.

Consequently, he used a content analysis of newspaper articles to measure the regulatory credibility of independent regulatory agencies. Specifically, he analysed articles published in newspapers in Switzerland and the UK that mentioned the agencies. The articles were coded for several variables related to the agencies' reputation, including whether they presented the agencies as competent, independent, and effective.

Maggetti then used statistical analysis to test whether the agencies' media coverage was related to their regulatory credibility, as measured by their ability to enforce regulations and maintain their independence from political interference. He found that positive media coverage was associated with higher regulatory credibility, suggesting that media reputation is important in shaping public perceptions of regulatory agencies.

It is worth noting that while media coverage is one factor that can influence regulatory credibility, it is not the only factor. Though the current study follows the indicators used by Maggetti (2010), the assessment was done from the perspective of PURC stakeholders (consumers, regulators, and policymakers). The indicators for measuring regulatory credibility, as seen in the conceptual framework, include:

Autonomy from elected politicians

As explained in chapter two above, it is situated within the literature on credible commitment and identification (Majone, 1997, 2002), and it assumes that elected politicians usually opt for independent regulatory agencies rather than government bodies (which they can control) because of policy credibility. Credible commitment is the mechanism by which they achieve

this, which assumes that elected politicians design regulatory institutions with the legal backing to insulate the agencies from political interference and private interests.

Predictable time – consistency of decisions and policies

In addition, a credible commitment by the government also seeks to assure stakeholders, particularly investors, of the consistency of regulatory policies and decisions. Thus, they would not unduly, in their discretion, discontinue or alter regulatory policies due to changes in times, including changes in government. This serves as an incentive to investors in the regulated industry.

Autonomy from regulatees, powerful businesses, and interest groups

From the perspective of regulatory capture, the credibility of regulatory agencies can be measured by analysing to see whether the agency has been captured by the regulatees, influential businesses, or interest groups to do their bidding. Regulation is supported to serve the public interest. Yet, previous research has reported that some regulatory agencies pursue private interests instead of public interest, such as the bidding of the industry they regulate (Peltzman, 1976; Stigler, 1971).

Trust from stakeholders

Citizens' trust and support for regulatory agencies are highly mediated by the regulator's responsiveness to stakeholders' needs. From the perspective of regulatory capture, when regulatory agencies lose the trust and support of stakeholders, including the government and the general public, they tend to do their regulated firms' bidding to stay relevant. This may significantly wipe out their regulatory credibility. The literature on trust in regulatory governance suggests that citizens' trust in regulated companies' services depends on their trust in the regulatory bodies that regulate those service providers (Cherney, 1997; Six & Verhoest,

2017). Therefore, to assess the credibility of PURC in the current study, stakeholders' trust in PURC is analysed.

2.11 How PURC's regulatory governance quality was measured

This section explains how the current study measured the various dimensions of PURC's regulatory governance attributes. It is presented according to the objectives of the study as follows:

2.11.1 Measuring the quality of PURC's institutional design and legal framework

To achieve the first objective, the study set out to analyse the alignment between PURC's legal and institutional design with critical attributes of effective regulatory governance. The study followed Jarvis and Savacool's (2011) framework for evaluating best practices in electricity regulatory governance. The framework provided for eight key input attributes, including clarity of roles and objectives, autonomy, accountability, transparency, capacity, integrity, and participation (Jarvis and Savacool's p.4343- 4345).

However, in the current study, only two attributes —autonomy and transparency— were considered to avoid overloading the study.

2.11.1.1 Autonomy

Jarvis and Savacool (2011) defined autonomy as “objective, fair and impartial decisions in the interests of all stakeholders” or “the mechanisms and procedures put in place that help ensure the regulating entity is not captured by government or private sector interests” (p.4343). The key indicators they used to measure autonomy include managerial autonomy, budgetary autonomy, rule and decision authority, statutory autonomy, meritorious appointment procedures, and protection from arbitrary dismissal.

In the current study, these indicators were adapted and put into question forms for the data collection (see Appendix 1)

2.11.1.2 Transparency

Similarly, Jarvis and Savacool defined transparency as "the process of revealing the assumptions and information on which decisions and actions are made so that outside observers can scrutinise them. They provide six indicators for measuring transparency" (p. 4344). However, the current study does not use the exact indicators but follows their definition and attributes to carve three interview questions, as seen in the interview guide (Appendix 1).

2.11.2 Measuring Responsiveness

To achieve the second objective, the study set out to analyse the level of PURC's responsiveness to the needs of its stakeholders. Unfortunately, from the literature, finding measures that would appropriately measure regulatory responsiveness was tricky. This is because the vast literature on regulatory responsiveness is essentially normative propositions that have received little empirical verification. Moreover, the majority of these measures that had been proposed had often conflated concepts of responsive regulation (Ayres & Braithwaite, 1992) and regulatory responsiveness (Stern & Holder, 1999), as if the two were inherent.

Therefore, since responsiveness broadly aligns with concepts of democracy and good governance, intuitively, the researcher considered only those indicators that align more with concepts associated with the theory of deliberative democracy and concepts of procedural justice in political science, including flexibility, stakeholder engagement, and timeliness. According to Malesky and Taussig (2017), these considerations are appropriate for explaining responsiveness and regulatory compliance issues.

Therefore, the current study measured responsiveness using flexibility, stakeholder engagement, and timeliness. In terms of flexibility, the current study sought to find out mechanisms PURC has put in place to make it innovative and adaptive to changing circumstances. Stakeholder engagement sought to investigate the procedures and mechanisms

PURC has put in place to consult widely and how public participation and consultation processes influence the decisions or operations of the PURC. The last indicator used to measure responsiveness was timeliness, which sought to ascertain whether PURC had any set deadlines to respond to stakeholder complaints or requests and whether PURC met or missed such deadlines.

2.11.3 Regulatory Credibility

To achieve the final objective, the study investigated the regulatory credibility of PURC. In the current study, credibility was measured following the literature on credible commitment (Majone, 1997; Levi-Faur, 2011; Gilardi, 2008), and it is defined as the ability of the IRA to operate without the influence of or interference from elected politicians as well as the trust stakeholders have in the regulatory process due to the perceived predictable time - consistency in regulatory policies and actions. The credibility of PURC was measured using the criteria Maggetti (2010) used to study the credibility of IRAs in the UK. They included autonomy from elected politicians, predictable time – consistency of actions and policies, the status of board members, autonomy vis a vis regulatory, and stakeholder trust.

However, the ‘status of board members’ was dropped in the current study on the advice of the researcher’s supervisory team. The reason is that board members of PURC are private; hence, it would be difficult for respondents, particularly the consumers, to give meaningful responses about their status. In place of that, trust for PURC was used. Stakeholder trust has been identified as a crucial ingredient of regulatory effectiveness (Six & Verhoest, 2017). The following are the indicators used to measure the regulatory credibility of PURC.

2.11.3.1 Autonomy from Elected Politicians

As explained in Chapter Two above, regulatory credibility is situated within the literature on credible commitment and identification (Majone, 1997, 2002), and it assumes that elected

politicians usually opt for independent regulatory agencies rather than government bodies (which they can control) because of policy credibility. Credible commitment is the mechanism by which they achieve this. It assumes that elected politicians design regulatory institutions with legal backing to insulate the agencies from political interference and private interests.

2.11.3.2 Predictable time – consistency of decisions and policies

In addition, a credible commitment by the government also seeks to assure stakeholders, particularly investors, of the time – consistency of regulatory policies and decisions. Thus, they would not unduly, in their discretion, discontinue or alter regulatory policies due to changes in times, including changes in government. This serves as an incentive to investors in the regulated industry (Levi-Faur, 2011).

2.11.3.3 Autonomy from regulatees, powerful businesses, and interest groups

From the perspective of regulatory capture, the credibility of regulatory agencies can be measured by analysing to see whether the agency has been captured by the regulators, influential businesses, or interest groups to do their bidding. Regulation is supposed to serve the public interest. However, previous research has reported that instead of public interest, some regulatory agencies pursued private interests, such as doing the bidding of the industry they regulate or eyeing appointments in governments or the organisations they regulate (Peltzman, 1976; Stigler, 1971).

2.11.3.4 Trust from Stakeholders

Citizens' trust and support for regulatory agencies are highly mediated by the regulator's responsiveness to the needs of stakeholders. From the perspective of regulatory capture, when regulatory agencies lose the trust and support of stakeholders, including the government and the general public, they tend to do the bidding of their regulated firms to stay relevant. This may significantly wipe out their regulatory credibility. The literature on trust in regulatory governance suggests that citizens' trust in regulated companies' services depends on their trust

in the regulatory bodies that regulate those service providers (Six & Verhoest, 2017). Therefore, to assess the credibility of PURC in the current study, stakeholders' trust in PURC was analysed.

2.12 Chapter Summary

This chapter presented the conceptual, theoretical, and empirical framework that underpins the current study. The theoretical framework consisted of the public interest theory of regulation, the capture theory of regulation, and the credible commitment model. A nexus of the three was proposed, and based on this model, relevant empirical literature was reviewed. Based on the review, a conceptual framework was constructed to guide the study. The chapter concluded by explaining how the various dimensions of regulatory quality were measured in the current study.



CHAPTER THREE

GHANA'S REGULATORY GOVERNANCE LANDSCAPE

3.1 Introduction

This chapter presents an overview of Ghana's regulatory governance context. The chapter has two sections. The first section reviews the history of regulatory reforms and regulatory governance in the global context. The subsequent section discusses Ghana's general regulatory governance system, beginning with Ghana's political economy before regulatory reforms. It narrows down to discuss the current regulatory governance system including Ghana's governance performance and failures in the electricity and water sectors.

3.2 Global Regulatory Reforms and Governance

There is a checkered history of regulation and deregulation reforms globally, particularly in developed countries, aimed at addressing issues such as market inefficiencies, improving competition, promoting innovation, and protecting consumers (Levi-Faur, 2011). There has been a period of regulation and a period of deregulation in the history of many developed countries (US and UK).

Glaeser and Shleifer's (2003) analysis of the history of regulatory policies in the US context suggests that in the United States, regulation, specifically in the railway sectors, began at the municipal level as early as the 1800s and spread to the state and federal levels later. In the early 20th century, regulation expanded to other industries, including utilities and telecommunications (Heims, 2024). The Federal Trade Commission Act of 1914 established the Federal Trade Commission, which regulated unfair business practices and promoted competition. Glaeser and Schleifer suggest that people rely more on litigation than regulation when they perceive that the legal system is robust enough. Their review points to the notion that the rise of the regulatory state was an efficient response to the state of legal institutions

during the late nineteenth century. By the 1930s, many sectors, including telecommunications and aviation, had joined the regulatory grid.

However, from the 1960s forward, there was a more general call for deregulation in the governance structure in just as many parts of the world, including the UK. Mayo (2011) highlights two critical drivers of this deregulation. First, the influence of the Chicago School of Regulation, which founded the economic theory of regulation, began to document evidence of the failures of regulation, which aroused significant scepticism among policymakers over regulation. The second driver was the ideological influences that festered on the backs of the mood of Americans toward the degree of control the government could have over the freedoms of individuals.

However, this state-led approach adopted in many countries after deregulation could not stop the later economic crisis. In response to the crisis, many countries began restructuring their economies through intensive liberalisation and privatisation policies (Levi-Faur, 2005). Along with this second wave of regulation came regulation as a policy toolkit to intervene in the imperfections in the market-led economy. This led to what Majone (1997) describes as the “rise of the regulatory state”, where states, through their bureaucracies, fronted development programs and service delivery.

Unfortunately, this state-led monocentric approach to regulation received severe criticism later, resulting in a transition to the current state-led polycentric governance approach to regulation—regulatory governance. States were predominantly managed through state-led development models, where the state-led development through its bureaucratic structures. However, the notion of regulatory reforms, which signalled a dual shift of market liberalisation and enhanced regulation, has given rise to what Braithwaite and Levi-Faur call “regulatory capitalism” (Levi-Faur, 2005; Braithwaite, 2008). This combination of market-oriented development models and

the rise of administrative bureaucracies involves not so much deregulation but re-regulation to facilitate, oversee, and check capitalism, involving both public and private actors.

3.2.1 Elements of Regulatory Governance Reforms

According to the OECD (2002), regulatory reforms provide a model for evaluating the quality of regulatory reforms. The reform model is based on three key mutually supportive elements: regulatory policies, tools, and institutions.

3.2.1.1 Regulatory Policy

Regulatory policy systematically develops and implements government-wide tools and institutions that shape how governments use their regulatory powers. This includes integrating competition policy and market openness initiatives into the regulatory policy agenda and changing the culture of regulators so that flexibility and outcome-oriented approaches are systematically favoured in regulatory design. Zhang and Thomas (2009:331) highlight two fundamental principles for a successful regulatory policy. First, regulatory policy should be a top-down approach at a high political level so that the policy will enjoy political support and enhance transparency. Secondly, there must be a significant focus on ‘improving rulemaking’ through creating and reforming “regulatory appraisal of new regulation and keeping regulation up to date.”

3.2.1.2 Regulatory Tools

The need to deploy practical regulatory tools as part of the regulatory reform process is based on the assumption that state regulation can produce both ‘good’ and ‘bad’ (Zhang & Thomas, 2009, p. 331). Regulatory supportive tools are analytical tools used to assess, control, and improve the processes and outcomes of regulatory decision-making. These may include such tools as regulatory impact assessment (RIA), public consultation, and consideration of regulatory alternatives.

3.2.1.3 Regulatory institutions

From an institutional perspective, Levy and Spiller (1999) view regulatory governance as a design problem. A robust institutional framework is essential to the success of any good regulatory regime. One trend that characterises the spread of regulatory reforms is the establishment of independent regulatory agencies. The critical benefit sought from an institutional framework based around these agencies is to shield market interventions from interference from political and private interests (Malyshev, OECD). The institutional framework also emphasises the identification of key actors, the nature of interaction that must exist among them, and how their interactions would be coordinated. As shown by North (1990), regulatory institutions imply formal legal institutions and very informal ones, which significantly affect the quality of formal rules or institutions and must be given equal attention.

Any regulatory reform aims to attain improved regulatory governance regarding transparency and accountability (Zhang, 2010). Majone concludes that, in designing an effective regulatory state, the key variables are: first, “the extent to which decisions are delegated to an independent agent rather than taken by the political principal”; second, “the nature of the structure of governance itself, particularly in determining the agent’s degree of independence from the political process”; third, “the rules that specify the procedural framework, e.g., reason-giving requirements, consultative processes”; fourth, “the scope for political principals to overrule agency decisions”; fifth, “the relative autonomy of financial resources”; and sixth “the extent of ex-post monitoring, e.g., legislative oversight, judicial review, citizen’s complaints procedure”.

Unfortunately, it is essential to conclude that, as noted by Zhang (2010), while this regulatory reform evaluation model is well established in the developed context, its use in the developing context is heavily affected by the specific local economic, political, and social contexts in

which the reforms are done. This suggests that there is no one-size-fits-all approach to regulatory reforms.

3.2.2 The Spread of Regulatory Reforms

Since its development in the 20th century in developed countries, including the USA, UK, and many other OECD countries, regulatory governance has spread significantly to emerging countries. According to Shaffer (2015, p. 2), this spread has been exacerbated by several events, including the “fall of the Berlin Wall, the rise of economic globalization, and the promotion of the so-called Washington Consensus by international financial institutions.”

In the United States, the rise of the “regulatory state” occurred in three stages. It began with the creation of regulatory institutions across several sectors, where issues of competition were the prime focus then moved to “economic sectors” in the inter-war period and afterwards, “social regulatory institutions” were established in the 1960s (Jordana & Levi-Faur, 2004, pp. 335-336).

One trend in the era of regulatory reforms in modern times is the establishment of independent regulatory agencies across the globe. Though regulatory agencies are not new, their relevance in governance has been felt only with the recent regulatory reforms in the 1990s. Independent regulatory agencies are autonomous institutions established by law and clothed with rulemaking power within a regulated space. In other words, they are regulatory bodies separate from the government and have the power to regulate various industries, including utilities.

It also involves ‘fact-finding, adjudication, monitoring, and enforcement’ (Levi-Faur et al., 2021, p.3). It is described as autonomous, in that, according to Levi-Faur et al., (2021), it can carve out its preferences. The idea of governance through “independent” regulatory agencies started in the United States in the 1880s and ‘was consolidated in a national system.’ (Jordana and Levi-Faur, 2004).

Emerging studies have indicated that establishing independent regulatory reforms is the most effective and preferred institutional design globally. For example, Ezzat (2015) examined the effectiveness of independent regulatory agencies in the telecommunications sector and reported that IRAs were more effective in promoting competition in the telecommunications sector than government agencies. The empirical studies confirm that independent regulatory agencies enhanced privatization and paved the way for better performance in the sector. Similarly, a study by Haney and Pollitt (2011) investigated the impacts of industry size and political and economic institutions on the degree of best practice regulation drawing from the incentive regulation and institutional economics literature. They reported that the existence and experience of an independent regulator is the most critical institutional determinant in best practice electricity regulation.

Overall, these studies suggest that independent regulatory agencies play crucial roles in regulatory policies across the globe.

3.3 Regulatory Reforms in Developing Economies

In most developing countries, economic regulation of water supply services primarily focuses on urban areas, where the economies of scale inherent in networked services continue to favour monopolistic water provision by a single utility provider (Franceys & Hutchings, 2017).

In the developing contexts, the regulatory reforms leading to the establishment of IRAs have been fronted mainly by international donors such as the IMF and the World Bank. For example, Badran (2012) utilised an institutional framework and conducted a qualitative analysis of documents and interviews with various stakeholders to explore establishing and disseminating Independent Regulatory Agencies (IRAs) in Egypt, specifically focusing on the telecommunications sector. The results revealed that establishing IRAs in the Egyptian telecommunications industry is a logical reaction to external isomorphic pressures imposed by

international agencies. According to him, the rationale behind this development could be attributed to functional and practical considerations rather than factors related to democratic governance or political uncertainties.

Frances and Gerlach (2012) concluded that while economic regulation of water services can be an effective mechanism for developing countries' governments to institutionalise their commitment to universal service and consumer protection while also promoting incentives for efficiency and effectiveness, regulatory governance is affected by political context. Thus, regulators operate in a politically charged environment in developing economies.

World Bank (2003) looked at business regulations in developing countries, but the focus was on measuring the impact of development policy. Stern and Holder (1999) assessed the performance of regulatory systems in developing Asian countries, but the appraisal was only made about economic regulations in infrastructure industries. A collection of case studies on institutional reform in developing countries was published in Minogue and Carino (2006). However, the cases were either concerned with a particular sector or focused on a specific aspect of regulation. Based on a questionnaire survey on Regulatory Impact Assessment (RIA), Kirkpatrick et al. (2004) reported on the awareness and use of RIA in 40 developing and transition economies. Despite the wider coverage of countries, the survey focused mainly on RIA, with other elements of regulatory governance largely uncovered.

Minogue outlines factors militating against regulatory reforms in developing countries. According to him, as a principle, for an effective regulatory regime, regulators must have both technical capacity and independence. First, regulators must have enough technological knowledge in the fields of the regulated industries. Unfortunately, most regulators in developing countries do not have the technological capacity to perform their work well.

Second, regulators must have independence from political control as well as the independence of resources.

Notwithstanding these studies, there is a distinct lack of theoretical understanding of economic regulation in developing countries (Buafa, 2015).

3.4. Regulatory Governance in Ghana's Electricity and Water Sectors

This section presents an overview of electricity and water sector reforms. It begins with the history of reforms in the electricity and water sectors with a specific focus on the legal and institutional framework of the PURC, as well as its regulatory mandate and governance processes in the electricity and urban water sectors. Subsequently, the section presents Ghana's governance performance and regulatory failures in the electricity and water sectors.

3.4.1 Ghana's Political and Economic Situation Before Regulatory Reforms

Politically, Ghana has undergone serious transitions in terms of regime type, system of government, and governance structures. Ghana, previously called the Gold Coast, gained independence from the British in 1957 when Dr Kwame Nkrumah, who had led the independence movement, was appointed Prime Minister. Three years later, Ghana became a republic in 1960 with Dr. Kwame Nkrumah as President. Unfortunately, Ghana came under military-cum-police regime following an overthrow of Nkrumah's government in a coup d'état in 1966. In 1969, however, Ghana returned to constitutional rule, marking the second Republic with Dr K. A. Busia, who had served as an opposition leader during the Nkrumah era and was elected Prime Minister. Again, Busia's government spanned only about two-and-a-half years and was overthrown in another coup d'état, bringing Ghana under another military regime in 1972, led by Colonel I. K. Acheampong. Power changed hands from Acheampong to General F. W. K. Akuffo in 1978 through a "palace" coup d'état. Akuffo to Flt. Lt. J. J. Rawlings (Edjekumhene et al., 2001).

Rawlings took over through another coup d'état, ruled for just over three months in 1979, and ushered Ghana into the Third Republic, which saw the election of Dr Hilla Limann as the third President of Ghana. Unfortunately, this civilian government was short-lived (just over two years). In 1981, Flt. Lt. Rawlings successfully took over through another coup and ruled Ghana for almost twenty years. The first eleven years as Chairman of the Provisional National Defense Council (PNDC) and the second eight years as President when he returned Ghana to constitutional rule in January 1993, marking the beginning of the current Fourth Republic. This Republic has seen tremendous political stability and institutional reforms geared towards improving the quality of governance (Edjekumhene et al., 2001).

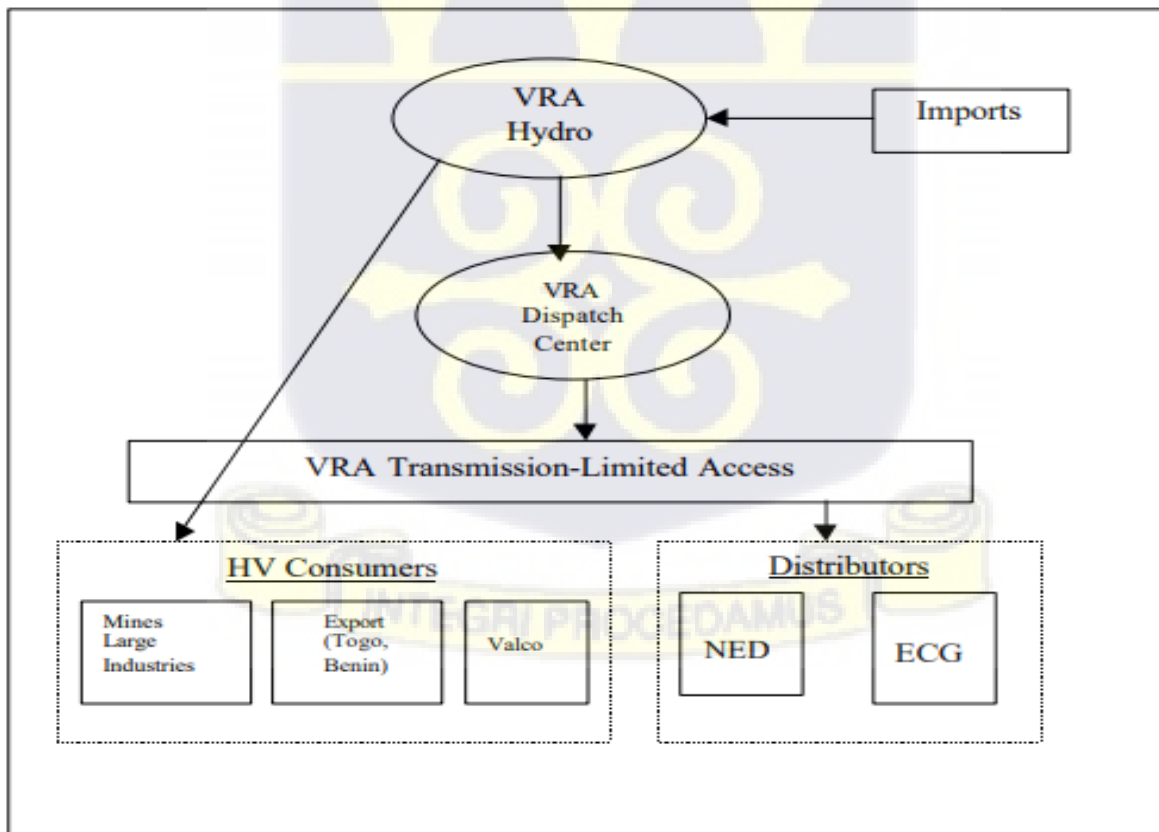
Economically, Ghana pursued a state-led economic development approach at independence in 1957, establishing several state-owned enterprises nationwide. This same approach was used to run the communication, water, and electricity utilities sectors. While this state-led development approach yielded some moderate successes in the 60s and 70s, especially regarding job creation, these gains were short-lived. By the late 1970s and early 1980s, the country's economy had fallen into a serious economic crisis characterised by poor productivity and poor financial crisis in the state-owned enterprises, negative growth rates in GDP, the decline in agricultural and industrial output, and rapid deterioration in infrastructure (Hutchful, 1996). The state-owned enterprises were underperforming and facing serious financial challenges.

Like many other countries, this general economic decline and political challenges became the impetus for regulatory reforms in Ghana. More specifically, in the utilities sectors, the reforms were necessitated by the growing demand, constraints in power supply, and difficulties with traditional financing sources (Edjekumhene et al., 2001).

3.4.2 Regulatory Reforms in the Electricity Utility Sector of Ghana.

Ghana's power sector was institutionalised in the early 1960s as the Electricity Department of the then Public Works Department of the Ministry of Works and Housing (Opam & Turkson, 2000). Before the reform, it was a vertically integrated monopoly with generation and transmission vertically integrated into the Volta River Authority (VRA) (Kumi, 2017). At the same time, the Electricity Corporation of Ghana (ECG) manned the distribution together with the Northern Electricity Department (NED), a subsidiary of VRA (Edjekumhene et al., 2000). By the early nineties (90s), other important institutions in the power sector were the Ministry of Mines and Energy and the State Enterprises Commission, which, with technical support from VRA and ECG, was primarily responsible for policy development and coordination in the electricity sector (Kumi, 2017). The institutional frame of the power sector before reforms is shown below:

Figure 3.1: Institutional frame of the power sector before reforms



Source: Edjekumhene et al (2001)

The reforms aimed at making the industry unbundled and competitive. The study of Edjekumhene, Amadu, and Brew-Hammond (2001) of the Kumasi Institute of Technology and Environment (KITE) was one of the earliest and most comprehensive studies into the main motivations for the reform, who the key reform players and actors were, as well as why they chose a particular reform model over another. They reported that the decision by the Government of Ghana (GoG) to reform the power sector was a result of the conditionality the World Bank attached to a credit facility granted to the GoG/VRA for the construction of a 330 MW thermal power plant at Takoradi. At the time, the country faced serious constraints in the supply and provision of power to meet the growing demand in the growing economy. The Takoradi project was required to resolve these constraints.

They also reported that, notwithstanding the Bank's recommendations for minimal reforms, particularly in the Electricity Corporation of Ghana, the GoG wanted to seize the opportunity to reform the whole power sector. Consequently, it was able to negotiate and influence the reform implementation process regarding policy options, local consultants, and reform models. Ultimately, the GoG chose the current "competitive model" to reduce its direct involvement in financing the new power sector by encouraging private sector participation.

Since the 1990s, the power sector has been going through continuous reforms with the unbundling of the sector and the establishment of two independent regulatory bodies – the Public Utilities Regulatory Commission (PURC) and the Energy Commission (EC) (UNECA, 2021). The milestones for the major reforms are outlined in the table below:

Table 3.1: Milestones of the Electricity Sector Reforms in Ghana

Date	Event
January 1994	GoG issues a Strategic Framework for Power Sector Development Policy.
March 1994	In March 1994, the Ministry of Mines and Energy (MME) engaged a consultant (SYNEX of Santiago, Chile) to study the opportunities for restructuring the power sector to enhance competition and efficiency.
June, 1994	SYNEX concludes the study and submits a report that proposes a new power market for the country
June 1994	Preparation of a sector policy letter by the MME, which laid out sector objectives, institutional guidelines, and regulatory principles
September, 1994	Establishment of the Power Sector Reform Committee (PSRC) by the MME to coordinate the design and implementation of reforms
Mid-1995	Formation of two Task Forces by PSRC: Task Force I was to review and develop the necessary tools for the operational technicalities of the reform program (particularly pricing and commercial organisation of the power market), and Task Force II was responsible for reviewing the legal implications of the proposals for the reform
August, 1996	A stakeholders' workshop was organised in Accra to discuss proposals emerging from the work of the Task Forces.
September, 1996	Formation of Review Task Forces to address specific issues emerging from the stakeholders' workshop. Two task Forces were constituted: The Distribution Task Force and the Customer Service Task Force.
April, 1997	PSRC submits a report containing findings and recommendations from the various task forces to the government
May, 1997	Establishment of the Power Sector Reform Implementation Secretariat to coordinate the implementation of the recommendations in the report. The secretariat prepared the necessary bills and model contracts for generation and distribution.
April, 1997	PSRC submits a report containing findings and recommendations from the various task forces to the government.
May, 1997	Establishment of the Power Sector Reform Implementation Secretariat to coordinate the implementation of the recommendations in the report. The

	secretariat prepared the necessary bills and model contracts for generation and distribution.
February, 1997	The Electricity Company of Ghana was registered as a limited liability company to take over the assets and operation of the Electricity Corporation of Ghana.
October, 1997	Enactment of the Public Utilities Regulatory Commission Act, 1997 (Act 538), which establishes the Public Utilities Regulatory Commission (PURC) as a regulatory body with powers to set tariffs, ensure compliance of the obligations by concessionaires, and arbitration of disputes between power utilities or between power utilities and customers.
December, 1997	Enactment of the Energy Commission Act, 1997 (Act 541), which established the Energy Commission – a regulatory body whose main responsibility is to license and develop rules to cover the technical operation of the utilities. The EC will provide policy support for MOME.
September, 1998	PURC approves tariff increases for all categories of consumers. Lifeline consumption decreased while the lifeline tariff was increased.
July, 1999	PURC organises a stakeholders' workshop on guidelines for rates chargeable for electricity supply services
September, 1998	PURC approves tariff increases for all categories of consumers. Lifeline consumption decreased while the lifeline tariff was increased.
July 1999	PURC organises a stakeholders' workshop on guidelines for rates chargeable for electricity supply services.
December, 1999	PURC prepares guidelines for electricity rate-setting by Act 538.
July, (2000).	MOME submits a draft of the Electricity Regulation to Parliament for approval.

Source: Edjekumhene et al (2001)

3.4.2.1 Regulatory Governance and Market Model in Ghana's Electricity Sector

Multiple laws and various institutions and actors now govern the electricity sector. To a large extent, basic policies are in place with provisions to ensure transparency and fairness and define the rules of engagement for all industry participants. (United Nations Economic Commission of Africa (UNECA), 2021). The reform model has replaced the previously integrated monopolistic system in which the Volta River Authority (VRA) owned and operated generation

and transmission assets in their entirety, together with a large share of distribution, was replaced by the current model or market structure with unbundled generation, transmission, and distribution assets. In the current electricity market structure, on one side are various generating stations (both publicly and privately owned), and on the other side are wholesale power customers (the regulated market), bulk power consumers (the deregulated market), and the export market (UNECA, 2021).

Regarding governance and regulation, the Ministry of Energy is primarily responsible for policy development, monitoring, and coordination. There are two independent regulatory bodies established in 1997 through two separate Acts of Parliament – the Public Utilities Regulatory Commission (PURC) (Act 538) and the Energy Commission (EC) (Act 541) (Edjekumhene et al., 2001). While the PURC is the economic regulator, the EC is the technical regulator (Opam & Turkson, 2000). Both regulators benefit from an acceptable level of political and financial autonomy and have the power to enforce their decisions (UNECA, 2021).

In the power generation segment, there is the Volta River Authority (VRA) —state-owned—, which operates the Akosombo and Kpong Hydropower Stations, as well as the Takoradi Thermal Power Plant (TAPCO), Tema Thermal 1 Power Plant (TT1PP), Tema Thermal 2 Power Plant (TT2PP), Kpone Thermal Power Plant (KTPP), and BUI Power Plants (state-owned company), that generates hydropower for the national grid, and independent power producers who supply power to the grid include, Sunon-Asogli, Ameri, Karpowership, AKSA, and TICO (owned and operated by TAQA, a private energy company with the VRA as a minority partner) (UNECA, 2021).

In addition, the following Independent Power Producers (IPPs) generation plants are available and generating electricity: TICO (VRA has a share), AMERI, Cenpower, Amandi, Early Power (Bridge Power), BXC, Meinergy, Safisana, and Genser.

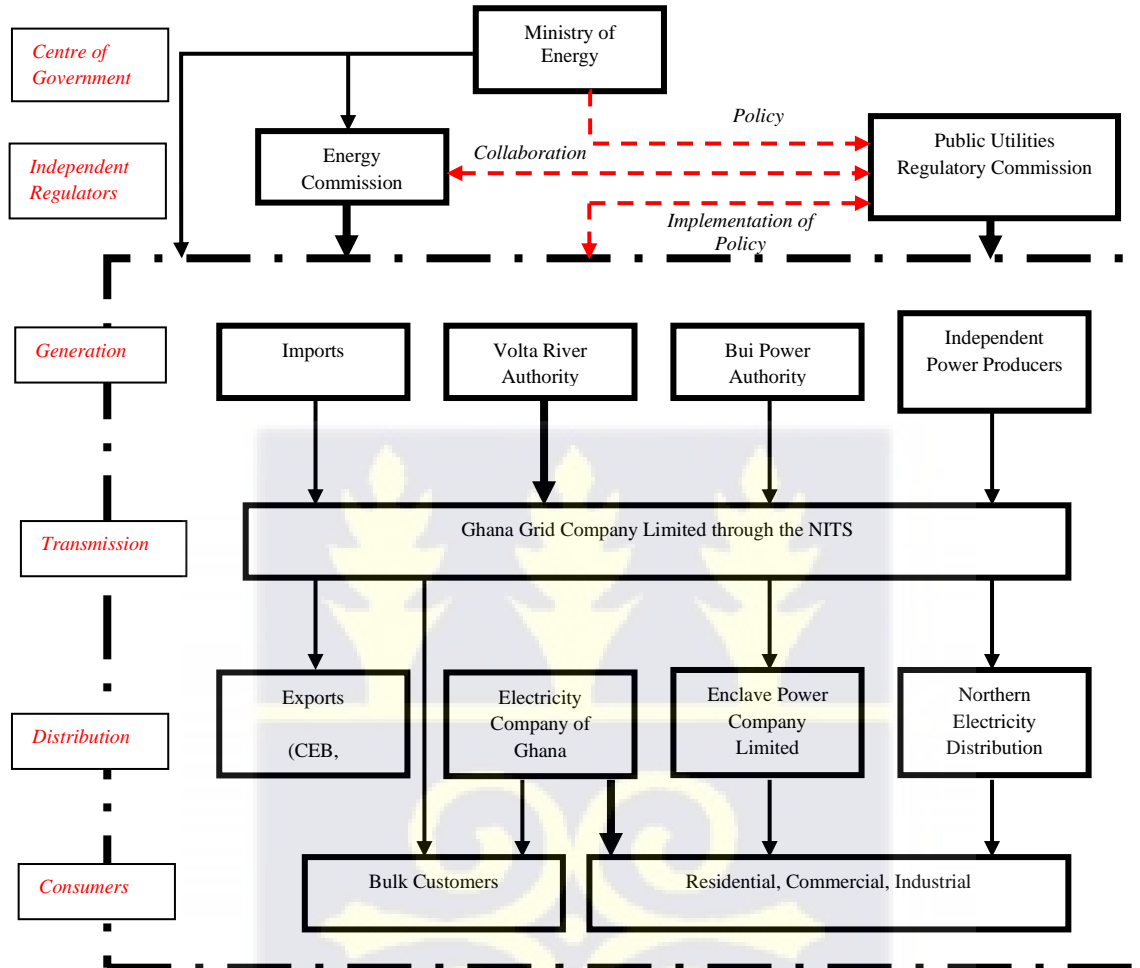
In the transmission segment, Ghana Grid Company (GRIDCo) — state-owned — is the sole transmission company in the electricity supply value chain. It owns and operates Ghana's National Interconnected Transmission System (NITS). It is also empowered to conduct the dispatch of all electricity generated by plants connected to the NITS based on the economic merit order principles. GRIDCO transmits the power to three distribution companies (ECG, NEDCO, and Enclave Power). In addition, GRIDCo transmits power to numerous licensed bulk customers for their consumption and the export market (Togo et al.).

In the distribution segment, two state-owned utilities, ECG and NEDCO, serve final residential, commercial, and industrial customers. A private distribution utility (Enclave Power) is licensed by the Energy Commission to distribute power with a concession in the Free Zones Enclave in the Tema industrial city. Unlike the customers of ECG and NEDCO, whose power purchases are regulated through tariffs set by the economic regulator (PURC), those in the deregulated market (bulk customers) can enter into long-term and bilateral trading arrangements with wholesale suppliers. Power purchase directly from them is determined through negotiated prices agreed on in contracts or power purchase agreements (PPAs). The governance and market structure in the electricity sector is shown in Figure 2 below.

Notwithstanding this neat arrangement, UNECA's (2021) regulatory review in the sector found that a major limiting factor to the performance of the electricity regulatory governance, particularly in the area of private participation, is Ghana's idea of regulating through a set of different laws in the regulatory governance system, rather than choosing a comprehensive Electricity Law, which defines the roles and responsibilities, of the various governing

institutions and market operators in the whole value chain. According to the study, these multiple laws may limit the clarity of existing legislation for private investors. The figure below shows Ghana's electricity sector's governance and market model.

Figure 3.2: Governance and market structure of the power sector



Source: Author's conception based on existing literature, 2023.

3.4.3 Regulatory Reforms and Governance in Ghana’s Water Sector

Water governance in Ghana is primarily the government's responsibility through the Ministry of Water Resources, Works and Housing (MWRWH) and the Ghana Water Company Limited (GWCL). The government aims to provide all citizens safe, affordable, and reliable water. Before reforms in the water utility sector in the 1990s, Ghana Water and Sewerage Corporation (GWSC) was created as a state-owned enterprise in 1965 and was responsible for providing

and distributing water in Ghana. It was expected to be financially viable by being able to fix water rates, sewerage charges, and other fees. Unfortunately, from the onset, its performance was hampered by several political and economic problems, including an incoherent governance structure and financial challenges (Bohman, 2012).

3.4.3.1 Institutional Reforms and Policy Framework in the Water Utility Sector

Like the electricity sector, Ghana's water sector is governed by multiple laws and various institutions. To ensure efficient water governance, the government of Ghana has established several institutions to oversee the management of water resources, including the Water Resources Commission, the Environmental Protection Agency, and the National Disaster Management Organization. These institutions work together to regulate and manage water resources and promote sustainable water management practices. In 1973, the ruling military government, the National Redemption Council, established the Ghana Standards Authority (GSA) through NRC Decree 173 - Standards Authority Act, 1973 (Braithwaite & Kheni, 2013). The GSA was responsible for setting drinking water quality standards and determining testing requirements within the water governance structure. In 1986, the Ghana Water and Sewerage Corporation created the Rural Water Department to focus on providing water for rural people. The Local Government Act of 2016 replaced the Local Government Acts 462, 1993/Act 936, and it, within the water governance structure, designates MMDAs as the legal owners of public water infrastructure. In 1994, the Environmental Policy Act 490 was enacted to establish the Environmental Protection Agency (EPA) as Ghana's principal environmental regulatory body. Within the water governance structure, the EPA is mandated to enforce compliance with environmental impact assessment procedures and is responsible for protecting water resources from environmental and industrial pollution. That same year, the Community Water and Sanitation Division (CWSD) was carved out of the Ghana Water and Sewerage Corporation in

line with the government's decentralisation policy. CWSD was established as a semi-autonomous unit focused on community water and sanitation delivery (Afrifa, 2020).

In 1996, the Water Resources Commission (WRC) was established through Act 522, 1996, with the primary responsibility to regulate and manage the sustainable use of Ghana's water resources (Brammah & Kheni, 2013). In addition, the WRC has the power to grant water rights and abstraction permits, conduct water quality investigations, propose plans for the utilisation, conservation, and development of water resources, and coordinate activities related to the use of water resources.

In 1997, the Public Utilities Regulatory Commission (PURC) was established through an Act of Parliament, Act 538, to regulate public utilities, including urban water supply. It was mandated to develop guidelines on rate setting, approving rates set by Ghana Water Company Limited (GWCL), monitoring GWCL performance, and conducting surveillance of GWCL.

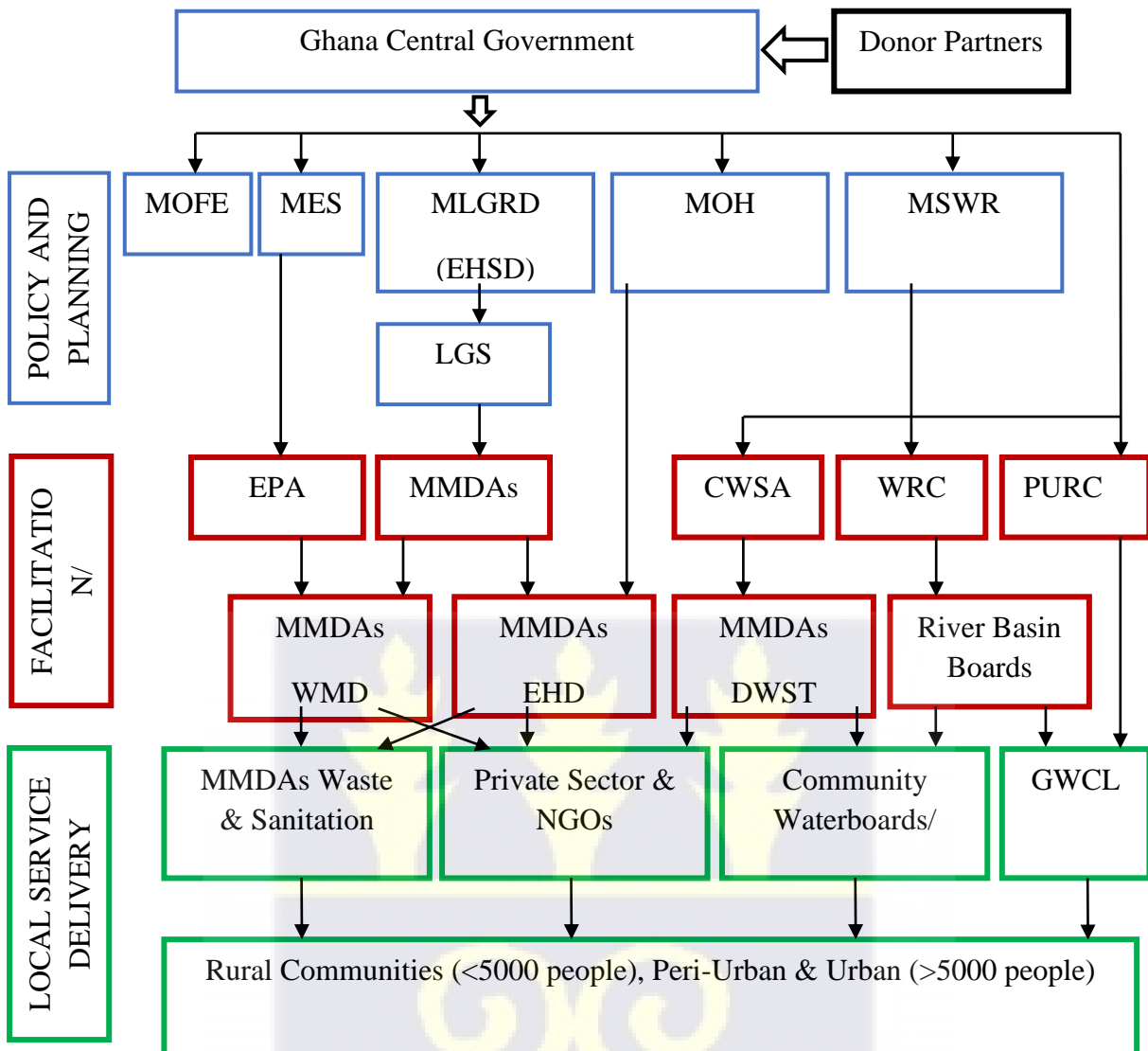
In 1998, through an Act of Parliament, Act 564, the Community Water and Sanitation Division was transformed into the Community Water and Sanitation Agency (CWSA) with full autonomy to facilitate and oversee the delivery of safe water to rural communities and small towns. It was also required to support District Assemblies (DAs) to promote sustainable, safe water and sanitation services, provide technical assistance to DAs for water development projects, formulate strategies for resource mobilisation in the rural water sector, and develop standards and guidelines for safe water supply in rural communities (Afrifa, 2020).

In 1999, through a Legislative Instrument 1648, the Statutory Corporations Act (461), which established the Ghana Water and Sewerage Corporation in 1965 as a state-owned enterprise, was amended to convert the Ghana Water and Sewerage Corporation into a fully state-owned limited liability company, Ghana Water Company Limited (GWCL) (Brammah & Kheni, 2013). GWCL was charged with the responsibility for Ghana's urban water supply.

In 2007, through a Legislative Instrument 2007, the Community Water and Sanitation Regulations 2011 was enacted to outline the national norms and standards for water supply schemes in rural areas and small towns. It also set the DA as the approving authority for all water service provision in rural areas and small towns. Under regulations, each person in a community is expected to have access to at least 20 litres of water per day. Second, any household's walking distance to a water facility should not exceed 500 meters (Ainuson, 2010). In addition, each hand pump or standpipe should serve no more than 300 persons. Again, water facilities are expected to provide water for at least 95% of the year. Finally, water quality is expected to meet standards set by the Ghana Standards Authority.

In 2017, Ghana established the Ministry of Sanitation and Water Resources (MSWR) to consolidate WASH development under a single ministry. Subsequently, GWCL, CWSA, and WRC were reassigned to the MSWR (Aquaya, 2020). The regulatory governance system for electricity and water in Ghana comprises several actors and institutions, including the government, regulatory bodies, service providers, and consumers. The Ghanaian government is responsible for setting policies and regulations that govern the provision of water services in the country. The government also provides financial support to service providers to ensure the sustainability of the utilities sector. The Public Utilities Regulatory Commission (PURC) and the Water Regulatory Commission (WRC) are the regulatory bodies responsible for overseeing the provision of water services, respectively (Ainuson, 2010). These bodies ensure that service providers operate efficiently to provide reliable services at reasonable prices, and protect the interests of consumers by ensuring that they receive safe, reliable, and affordable services.

Figure 3.3: Policy and Governance Framework of Ghana’s water sector



Source: Author’s construct based on existing literature, 2023.

3.5 The Public Utilities Regulatory Commission (PURC) in the Electricity and Urban Water Utilities Sectors.

This section reviews PURC’s institutional and legal framework and regulatory governance processes in the electricity and urban water sectors.

3.5.1 Legal Framework

The Public Utilities Regulatory Commission Act, 1997 (Act 538), provides for establishing a Public Utilities Regulatory Commission (PURC) to regulate and oversee the provision of utility services to consumers and provide guidance on related matters. The PURC was established as

an independent multi-sector regulatory agency with regulatory oversight in the electricity and urban water utility sectors.

The PURC is responsible for:

- i. Providing guidelines on rates chargeable for the provision of utility services;
- ii. Examining and approve rates chargeable for the provision of utility services;
- iii. Protecting the interest of consumers and providers of utility services;
- iv. Monitoring and enforcing standards of performance for the provision of utility services;
- v. Initiating and conducting investigations into standards of quality of service;
- vi. Promoting fair competition among public utilities;
- vii. Receiving and investigating complaints;
- viii. Conducting studies relating to the economy and efficiency of public utilities;
- ix. Advising any person or authority regarding any public utility; and
- x. Performing any other functions as are incidental to its other functions.

In addition to the principal Act 538, there are other laws, including the Energy Commission Act, 1997 (Act 541), which mandates PURC to regulate the pricing of transportation of natural gas services. The PURC (Amendment) Act, 2010 (Act 800) also imposes levies on regulated utilities to be paid to the Commission. Under the Renewable Energy Act, 2011 (Act 832), PURC also plays regulatory functions and collaborates with the Energy Commission and other statutory bodies in implementing the Renewable Energy Act, 2011 (Act 832). Under this Act, the PURC is charged under section 5 to first approve rates chargeable for the purchase of electricity from renewable sources by utility providers; second, approve charges for grid

connection; and third, approve rates chargeable for wheeling electricity from renewable energy sources.

3.5.2 Governing Body

PURC is made up of a nine-member Board of Commissioners. The Commissioners consist of a Chairman, an Executive Secretary, four persons with knowledge in matters relevant to the functions of the commission, and a representative each of the Trades Union Congress (TUC), the Association of Ghana Industries (AGI), and Domestic Consumers. In consultation with the Council of State, the President appoints a Board of Commissioners except institutional representations.

The work of the Commission is organised through committees comprised of commissioners, external experts, and secretariat staff. The committees are responsible for in-depth analysis of matters referred by the commission, review of reports, and submission of recommendations to the commission for approval and implementation (PURC Report, 2019). The committees are: Technical Committee, Finance and Administrative Committee (F&A), Legal, Complaints & Dispute Resolution Committee, and Stakeholder Management & Communication Committee. Statutory committees are the Entity Tender Committee (ETC) and the Audit Committee (PURC report, 2021).

3.5.3 Regulatory Governance Attributes of PURC

This section analyses the regulatory governance attributes of PURC with a particular focus on its institutional and legal designs.

3.5.3.1. Independence and Accountability

A major challenge for regulatory governance scholars relates to the autonomy and accountability of independent regulatory agencies (Levi-Faur, 2011). According to Section 4 of Act 538, the PURC is an independent body and is not subject to the direction or control of

any person or authority in performing its functions. However, PURC is statutorily required to submit annual audited statements of accounts and reports of its operations to the Parliament of Ghana (PURC Annual Report, 2021). The Commission has legislative powers by Act 538, 1997. For example, it has enacted the PURC (Consumer Service Regulations LI 2413) Regulation to improve its redress mechanism and enhance consumer protection and Utility Service Providers.

However, besides having institutional representation on the commission, PURC places a premium on its extensive stakeholder consultations in decision-making. For example, in its regulatory policy and good regulatory practice, the commission is enjoined by law to take account of consumer representations before approving any major rates. In addition, PURC is statutorily required to submit audited statements of accounts and reports of its operations every year to the Parliament of Ghana, as well as reports to the Office of the President.

Until recently, PURC has suffered serious challenges in terms of financial autonomy. Initially, it was financed through subventions from the Government of Ghana. In most instances, the commission's proposed budgets were slashed by more than half. As a consequence, the commission was not able to meet its expectations. In addition, it could not implement most of its planned pro-poor intervention projects (PURC report, 2002).

Table 3.2: Comparison of the Commission's proposed budget with the amount approved and actual subventions received

Year	Proposed budget ¢Billion	Approved budget ¢Billion	Received ¢Billion
1997-1998	1.1	0.9	0.9
1999	5.0	3.6	1.2
2000	5.5	2.6	1.7
2001	8.5	2.1	2.1
2002	8.5	2.7	2.5

Source: PURC report (2002)

However, in recent times, this budgetary challenge has been reduced substantially from previous years because PURC is now financed by a regulatory levy imposed on transmission service charges.

3.5.3.2 PURC's Relationship with Statutory Bodies and Key Stakeholders

Relations with statutory institutions and other stakeholders in delivering on its mandate: The commission has official working relations with entities within Ghana's energy and water sectors and other institutions whose work impacts that of the commission. These institutions include the Ministry of Energy, Ministry for Sanitation and Water Resources, Energy Commission, Volta River Authority, Ghana Grid Company, Electricity Company of Ghana, Northern Electricity Distribution Company, Ghana National Gas Company, Ghana Water Company Limited, Water Resources Commission, Independent Power Producers, Independent Sachet Water Producers, Ghana Statistical Service, Bank of Ghana, the Legislature, the Executive, Trades Union Congress, Association of Ghana Industries and consumers, identifiable groups, and Civil Society Organizations and Consumers.

Table 3.3: Regulated Utilities

Regulated Body	Jurisdiction
Volta River Authority (VRA), Bui Power Authority (BPA)	Nationwide Power Generation
Ghana Grid Company Ltd (GRIDCo)	Nationwide power transmission.
Electricity Company of Ghana Ltd (ECG)	Power Distribution, Southern Sector
Northern Electricity Distribution Company Ltd (NEDCo)	Power Distribution, Northern Sector
Enclave Power Company Ltd (EPCL)	Power Distribution, Free Zones and Concession
Ghana National Gas Company Ltd (GNGC).	Natural Gas Pricing of Processing and Transportation
Ghana Water Company Ltd (GWCL)	Urban Water Production, Transmission, and Supply

Source: PURC Report (2021)

At the regional level, PURC is a member of the African Forum for Utility Regulators (AFUR), which aims to promote good regulatory policies or practices on the African continent. Not only is PURC a member, but it also sits on the executive committee of this prestigious body. At the sub-regional level, the commission is a member of the ECOWAS Regional Electricity Regulatory Authority (ERERA), which aims to develop sound technical policies for the electricity sector in the West African sub-region.

3.5.4 A brief overview of PURC's recent regulatory activities and processes

3.5.4.1 Community Presence

The PURC has implemented measures to monitor closeness to consumers' doorsteps effectively. For example, the commission has created offices in 10 out of the 16 regions of Ghana, including the Northern, Upper West, Upper East, Bono, Western, Central, Ashanti, Eastern, Volta, and Greater Accra regions of Ghana. The various regions receive and resolve complaints from regulated utility service providers and consumers. In addition, regulation 18 of the PURC 2020 Act has established Voluntary Consumer Service Committees (CSCs) in some parts of the country, which keep issues affecting the interests of consumers under constant review and submit reports to the commission.

3.5.4.2 Grievance Redress Mechanism

Until 2020, only utility consumers could report their service providers to the commission. However, under PURC (Consumer Service) Regulations 2020 (LI 2413), the laws have been reviewed to enable utility service providers to report consumers to the commission. This is expected to enhance PURC's responsiveness to these key stakeholders, particularly in grievance redress procedures.

3.5.4.3 Regulatory actions of PURC in recent years

The PURC has issued several regulatory orders to various regulated utilities for breach of their statutory obligations under the Public Utilities Act, 1997 (Act 538). For example, a regulatory

order No. PURCECG12022, dated October 04, 2022, was issued to ECG and read as follows:

The commission regarding the vending failure in ECG's Prepayment System across the country from September 2022 to early October 2022.

“In light of the breach of ECG’s statutory obligations, specifically sections 11 and 12(1) and (2) of the Public Utilities Act, 1997, (Act 538) and Regulations 41 and 45 of the Public Utilities Regulatory Commission (Consumer Service) Regulations, 2022 (LI 2413), the Commission hereby orders ECG to pay compensation to the affected customers by the attached Order. This complies with the law and demonstrates good customer service.”

According to the 2021 annual report of the commission, ten thousand nine hundred and eighty-seven (10,987) complaints were received against electricity and water distribution companies as well as some consumers. Out of this number, one hundred and twenty-four (124) complaints were lodged by utility providers against consumers, representing 1.13% of total complaints received. As of the end of 2021, a total of ten thousand seven hundred (10,701), representing 97.40%, had been resolved, and the rest were at various stages of the commission's complaints resolution management procedures (PURC Report, 2021).

3.5.4.4 Participation and Accountability

The Public Utilities Regulatory Commission receives tariff proposals from the regulated utilities for the 2022 major previous tariff reviews and organises vigorous nationwide stakeholder consultation and public hearings. This invites stakeholders and consumers from all walks of life to participate and contribute. Their inputs and feedback were incorporated into the final tariffs announced. Again, the commission also commenced in 2022 and conducted a nationwide Consumer Service Clinic (CSC) across the country to afford consumers and utility service providers a platform to lodge complaints on the quality of service in the region. According to the commission, these Consumers Service Clinics form part of the commission's

transparency and accountability to the various stakeholders and allow participation in its regulatory decisions.

3.5.4.5 Policy Directions on PURC Tariffs

Ghana's tariff structure has historically been characterized by a pricing mechanism where residential households are subsidized, paying less than the actual cost of electricity supply. Conversely, the non-residential and industrial sectors are subjected to a surcharge, paying more than the true cost of their electricity supply. This cross-subsidization phenomenon, where the non-residential and industrial sectors bear the cost of subsidizing residential consumers, is a prevalent practice in approximately two-thirds of developing countries worldwide (Foster et al., 2020).

The reason is that in many developing nations, electricity is regarded as a social good, prompting governments to implement policies aimed at ensuring affordability for low-income households and, to some extent, appeasing politically influential groups (PURC Brief, 2024). This approach has been criticized for its perverse outcomes, warranting a re-evaluation of the tariff structure to promote equity and sustainability in the electricity sector. Most developed countries adopt a tariff structure where industrial consumers are charged lower electricity prices compared to other consumer categories (IEA, 2012). This approach is justified by the fact that the cost of supplying power to industrial consumers is often lower than that of residential consumers. Industrial customers typically receive power at high voltages, eliminating the need for voltage reduction and associated costs. Additionally, they are often connected to centralized components of the electrical network, minimizing transmission and distribution losses (PURC Brief, 2024).

Dye (2023), in particular, observes that this cross-subsidization policy by Ghana has had serious implications for the industry causing some businesses to stop operations in Ghana.

Thus, high electricity costs and inconsistent supply are hindering the productivity and efficiency of Small and Medium Enterprises (SMEs). This high electricity cost in Ghana has been noted as a major contribution to the cost of doing business in Ghana (Owusu et al., 2020).

In response to these calls, PURC, beginning from the 2022 major tariff setting, reversed the cross-subsidization policy making households pay for their actual consumptions. The purpose is to ensure fairness in the tariff regime while also protecting businesses. To address this, the reversal of the cross-subsidy aims to alleviate the operational costs of commercial and industrial consumers. In addition, the elimination of the cross-subsidy also aims at promoting productive energy use, thereby rewarding efficient consumption (PURC Brief, 2024).

3.6 Ghana's Governance Performance on Government Effectiveness and Regulatory Quality.

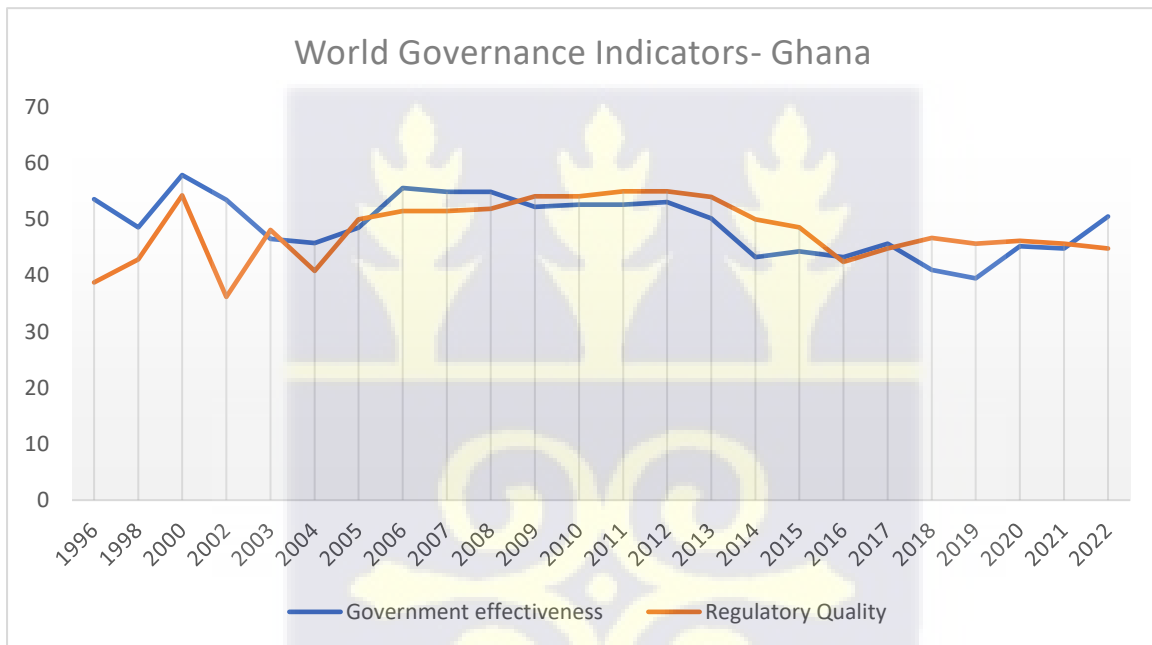
Ghana consistently ranks high in governance assessments in Africa. According to the World Governance Indicators (WGI), Ghana has maintained an above-average performance in most governance dimensions, including voice and accountability, and government effectiveness, within the sub-Saharan Africa context. Similarly, the latest Ibrahim Index on African Governance (IIAG) ranks Ghana 1st in freedom of association and assembly, 3rd in personal liberties, 4th in accountability and transparency, and 8th in overall governance (Mo Ibrahim Foundation (2020).

However, despite these accomplishments, Ghana's performance masks significant internal weaknesses. Between 2010 and 2019, Ghana's average score for overall government effectiveness was only 48.2%, indicating below-average performance (WGI). Figure 3.4 illustrates the decline in Ghana's performance across six selected indicators over the last decade, showing minimal improvement in two areas (voice and accountability, political stability, and absence of violence), stagnation in one (rule of law), and significant deterioration in three: overall government effectiveness (-12%), control of corruption (-6%), and quality of

regulatory institutions (-4%), culminating in a -15% cumulative rate of change (Figure 3.4). The IAG dataset corroborates these trends, highlighting Ghana's struggling governance performance.

A critical aspect of governance is regulatory quality, which assesses the government's ability to formulate and implement policies promoting private sector development. Ghana's percentile rank in this area reflects its relative position among countries covered by the WGI, with adjustments made for changes in country composition over time (Kaufmann et al., 2010).

Figure 3.4: World Governance Indicators-Ghana



Source: Databank. worldbank.org

From the diagram above, regulatory quality scores show an interesting pattern. A general upward trend from 1996 (38.8) to 2011 (55.0) showed an enhanced ability to formulate and implement sound policies. However, a downward trend is observed from 2013 (54.0) to 2016 (42.4). After that, scores have remained relatively stable between 44.8 and 46.7 from 2017 to 2022.

It can be observed that in the early years, government effectiveness scores were generally higher than regulatory quality scores. From 2009 to 2015, the scores for both indicators were closely aligned and since 2016, regulatory quality scores have often been slightly higher than government effectiveness scores, except for 2022. Both indicators show considerable fluctuations, suggesting inconsistent governance performance over time. The significant increase from 2019 to 2022 may indicate recent efforts to enhance public service quality and policy implementation. Also, the relative stability in regulatory quality scores since 2017 suggests a consistent approach to policy formulation and implementation in recent years. Generally, while there are periods of divergence, the two indicators often move in similar patterns, suggesting a relationship between government effectiveness and regulatory quality in Ghana.

Essentially, Ghana's governance performance is affected by a myriad of factors. A study by UNDP (2021) governance deficits such as weak state capacity, corruption, patron-client relations, the unlimited exercise of active citizenship, persistent weakness in decentralisation and local government, and limited youth participation and representation.

3.7 Regulatory Failures of Electricity and Urban Water Sectors in Ghana

The existing literature highlights the multifaceted nature of successful regulatory governance in the electricity and urban water sectors. Thus, the successes of regulatory governance in the electricity and urban water sectors of Ghana have been affected by a myriad of factors.

A crucial factor among these is political settlement dynamics. Observers think that political settlement is the key contextual issue affecting Ghana's performance across all dimensions of governance (Appiah & Abdulai, 2017). According to Whitefield et al., (2015: 157) there are "strong incentives for ruling elites across both parties to focus on short-term objectives of political survival." These political contexts manifest in many ways.

The first is the politics of tariff determination. This challenge can be traced back to the 1970s when tariff determination was surrounded by political dynamics. For instance, in Ghana, between 1977 and 1986, successive governments, both democratic and military, were hesitant to implement tariff increases. Instead, they opted to subsidize approximately half of the corporation's operating expenses, plunging it into financial turmoil. Consequently, from 1990 onwards, tariff adjustments merely kept pace with inflation levels, failing to address the underlying financial sustainability concerns (Nyarko, 2007).

Closely linked to this challenge is political interference in tariff-setting. The establishment of the Public Utilities Regulatory Commission (PURC) aimed to insulate water pricing from political interference by delegating tariff-setting authority to an independent regulator (Bayliss & Amenga-Etego, 2008). However, despite introducing cost-recovery targets and establishing PURC, the minister's approval remains a requisite for water tariff adjustments, undermining the intended autonomy (Nyarko, 2007).

Furthermore, the issue of appointment procedure significantly affects regulatory governance in the electricity and water sectors. Thus, political appointments in the utility sectors have far-reaching implications for effective management and performance. Appointees, often selected based on allegiance to the ruling party, may prioritize political interests over independent decision-making, compromising capital investment choices and strategic planning. The managing director's tenure is contingent upon maintaining harmonious relations with appointing politicians, hindering continuity, consistency, and long-term planning. As Nyarko (2007: 77) notes, political appointments foster a conservative approach, as managing directors avoid innovation to maintain their positions. Additionally, politically motivated appointments can spark internal power struggles and frustration among public water company employees, as selections are often based on political connections rather than merit.

Another factor contributing to regulatory failures in the electricity and water sectors relates to weaknesses in the model of regulatory reforms adopted in the 1990s. Thus, the uncritical adoption of Western-style good governance models, emphasizing privatization and formal legal reforms has significantly hindered effective regulatory governance in Ghana (Hirvi & Whitfield, 2015). The Western-style approach neglects local specificities, resulting in a mismatch between imported models and domestic realities. Existing research recognizes the importance of considering the informal legal rules and local-specific factors during reforms. For example, Foster and Rana (2019) emphasize the need to consider informal political power in reforms. Similarly, Dye (2020) highlights the limitations of focusing solely on formal legal frameworks, neglecting the political context. Recent research by Aigbavboa et al. (2023) shows that urban water interventions have failed due to inadequate consideration of institutional landscapes and stakeholder engagement.

Moreover, deficits in the institutional and democratic characteristics such as accountability, transparency, accessibility to information, sense of ownership, responsiveness, monitoring and evaluation measures, and conformity to established standards have been identified as key issues affecting the quality of regulatory governance in the electricity and urban waters sectors of Ghana. For example, a study by Danso (2019) suggests that the failure of the government (agent) to uphold core accountability mechanisms such as transparency, accessibility to information, sense of ownership, responsiveness, and conformity to established monitoring and evaluation measures, contributed to the inability to achieve key performance targets, leading to the unsuccessful policy outcome of the privatization contract.

Another critical issue is the ineffective national policy, particularly in the water sector. As of now, there is an absence of comprehensive national policies, coordinated legal frameworks, and institutional structures, as well as deficiencies in water supply and sanitation services

(Addo, 2020). A recent report by Aquaya (2020) revealed that first, sachet water, which has become the primary source of drinking water for urban dwellers in recent years, is regulated by Ghana's Food and Drug Administration (FDA) and GSA yet the majority of sachet water manufacturers are not legally registered or monitored by any institution. Second, responsibilities for water service provision in schools and healthcare facilities fall within the jurisdictions of their respective line ministries, the Ministry of Education (MoE) and the Ministry of Health (MoH). Employees from the ministries' technical agencies are embedded within the MMDAs to manage water service priorities and improvements. The MSWR does not have staff representation at the district level to liaise with health or education staff on water needs (Aquaya, 2020). Thirdly, though CWSA's organisational shift has occurred rapidly, policy has not yet caught up. Consequently, there are currently no legal provisions regulating CWSA activities as a utility, and the mechanism for DAs and CWSA to settle water disputes is unclear. Finally, there is currently no regulatory body to monitor the activities of MMDAs to ensure local water supply improvement.

This ineffective water policy implementation as well as the lack of a well-structured institutional framework, has resulted in detrimental consequences for daily water availability in Ghana (Aigbavboa et al., 2023).

The electricity and urban water sector failures can be viewed from the capture theory perspective as explained in chapter two. The failures weaken the regulator's ability to exercise its regulatory authority effectively, translating into the service providers delivering poor services to the public. However, evidence suggests that creating PURC can be viewed from the public interest and credible commitment theory, as explained in Chapter Two above.

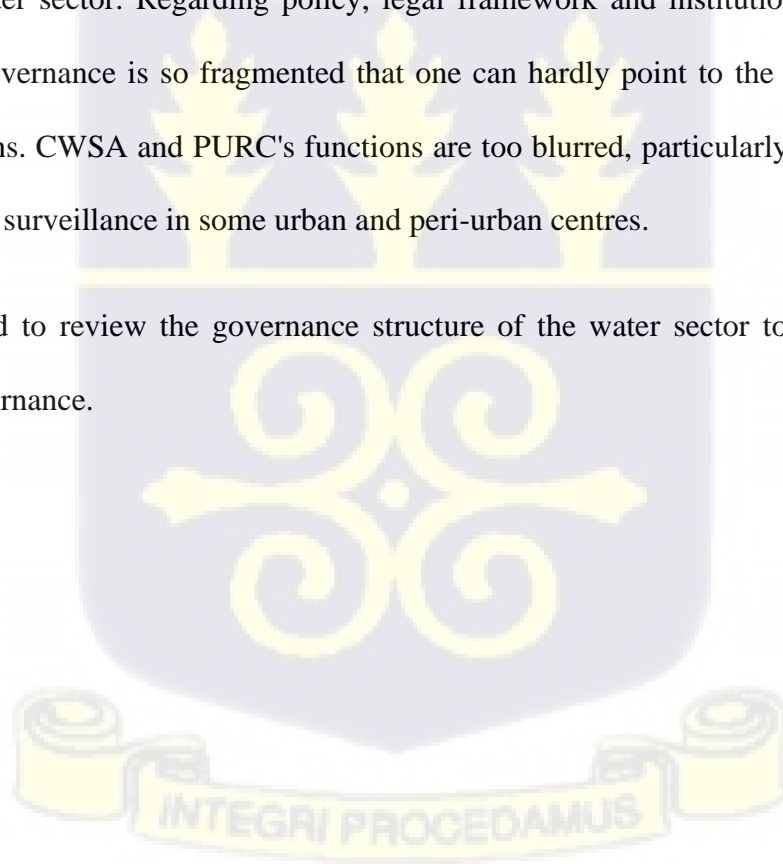
3.8 Chapter Summary

Much of the literature has focused on assessing the quality of regulatory governance across nations following the spread of regulatory reforms across the globe, beginning in the 1980s in developed countries and continuing in the 1990s in the developing context.

Literature analyses of regulatory reforms are scanty and patchy, largely dominated by institutional studies of the World Bank, the African Development Bank (AFDB), and the Organisation for Economic Cooperation and Development (OECD). Only a few scholars have examined them from the African context. This is particularly true in the Ghanaian context.

A closer look shows that regulatory governance in Ghana's electricity sector is more organised than in the water sector. Regarding policy, legal framework and institutional arrangement, water sector governance is so fragmented that one can hardly point to the laws that govern some institutions. CWSA and PURC's functions are too blurred, particularly in water quality monitoring and surveillance in some urban and peri-urban centres.

There is a need to review the governance structure of the water sector to enhance proper regulatory governance.



CHAPTER FOUR

METHODOLOGY

4.1 Introduction

In this chapter, the researcher outlines the research methodology employed for the study, detailing the philosophical assumptions, approaches, methodology, and data collection and analysis processes. The discussion commences with an overview of the significant philosophical assumptions underpinning social science research, which guide the selection of an appropriate framework for the current study. The subsequent sections delve into the study's positioning within a subjective, interpretive framework, emphasising the adoption of a qualitative framework and case study technique. The methodology further details the use of purposive and snowball sampling, interviews, focus group discussions, and document reviews as methods for collecting data—a comprehensive account of data collection, management, and analysis, concluding with an exploration of ethical considerations.

4.2 Philosophical foundation of the study and its appropriateness

Every scientific investigation fundamentally relies on philosophical assumptions and the researcher's convictions, shaped by their beliefs about knowledge and truth, constituting their worldview (Lincoln & Guba, 2011). Terming a research philosophy or paradigm in social science, Creswell and Creswell (2017) define it as a collection of beliefs and principles influencing a specific research endeavour, guiding the examination of phenomena and determining the interpretation of outcomes.

In the current study, the researcher adopted the interpretive research philosophy to elucidate the study's components and incorporate the human dimension into the investigation. Advocates of this paradigm posit that interacting with the elements of a social phenomenon enhances our comprehension of the world, asserting that reality is a social construct (Tuli, 2010).

Consequently, this paradigm was employed to gain deeper insights into people's diverse experiences and perceptions influenced by their ideas and values (Boateng, 2016).

Furthermore, adopting the interpretive research philosophy enabled the researcher to discern the reality or truth in respondents' perspectives, opinions, and experiences concerning the quality of PURC's regulatory governance in the electricity and urban water sectors. Specifically, the quality of PURC's institutional design, autonomy and transparency, responsiveness, and credibility is based on respondents' perspectives, experiences, and perceptions.

Therefore, the interpretive research approach was chosen to focus on subjectivity in data interpretation and enhance understanding of participants' experiences (Thanh & Thanh, 2015). Additionally, this paradigm facilitated a concentrated exploration of the subjective aspects of the data, providing a nuanced understanding of the participants' perspectives.

In addition, the decision to situate the current study in a subjective ontology and an interpretive epistemology was influenced by the nature of the objectives and the research questions. This is because, first, the researcher recognises that the three key aspects of regulatory governance being explored, quality of legal and institutional design, responsiveness, and credibility, are non-concrete constructs and inherently fundamentally subjective. Their complete understanding required subjective articulation and interpretation (Grootaert et al., 2003; Onyx & Bullen, 2000). Therefore, the study was steeped in a subjective framework to effectively capture various stakeholders' particular idiosyncratic meanings, experiences and perceptions about PURC's regulatory governance quality.

Secondly, the researcher believes that knowledge is co-created by active engagement between the researcher and research subjects. This outlook implies that the researcher influences the research process and cannot be discounted as a mere external passive observer of independently

existing phenomena (Blaikie, 2007). His values and choices have consequences on the knowledge that is created. Therefore, the study was situated in an interpretive framework to provide an adequate ambience for explaining such values and choices.

Finally, the study aimed to understand the context-specific determinants influencing the quality of regulatory governance. The study needed to be positioned in an interpretive framework to achieve this. These context-specific determinants include the nature of the country's political, economic, environmental, and social factors that affect regulatory policies and regulatory agencies' performance of their regulatory functions. The paradigm was chosen because it orients the study to elicit details based on contextual knowledge and interactions between and among the various actors and institutions in the sectors under study. Therefore, positioning the study in the interpretive framework enhanced a more profound understanding while offering flexibility to highlight the complexities surrounding regulatory governance in Ghana's electricity and urban water sectors (Raadschelders, 2011).

4.3 Research Approach

Aligned with the study's objectives and philosophical foundation, the study employed a qualitative approach. This method constitutes a systematic endeavour to comprehend social reality, constructing a detailed, holistic depiction of participants' perspectives within a natural context (Creswell, 2009; Silverman, 2006). Boateng (2016) emphasises the importance of considering context, timing, and experience in selecting qualitative studies, highlighting their ability to enhance understanding of processes, situations, complexities, values, circumstances, and participant backgrounds (Creswell, 2009).

As previously stated in Chapter One, the overarching objective of the study was to conduct a comprehensive qualitative investigation into the regulatory governance of the Public Utilities Regulatory Commission (PURC) in Ghana, assessing the alignment of its legal and institutional

design with recognised features of autonomy and transparency for effective regulatory governance, assessing its responsiveness to stakeholders in the electricity and urban water sectors, and examining the perceived level of regulatory credibility provided to stakeholders. The qualitative perspective and its associated methods facilitated the generation of rich data and insights into the experiences and perspectives of key stakeholders of the PURC. Given the intricate blend of subjective considerations in analysing the quality of institutional design, responsiveness and credibility, the qualitative approach was deemed appropriate for offering more nuanced intricacies of the nature of PURC's regulatory governance (Creswell, 2009; Denzin & Lincoln, 2011; Yin, 2009).

Furthermore, qualitative studies are particularly apt when exploring a phenomenon in its natural setting. Conducting this study in the natural environment of respondents – offices and communities – justified adopting the qualitative approach. This approach enabled the detailed exploration of the experiences and observations of stakeholders of PURC, including consumers, utility service providers, government officials, civil society organisations, and businesses in their respective settings, providing a platform for them to share their perspectives on various issues.

Considering the study's subjective nature, an emergent approach was deemed necessary for its flexibility and adaptability to reflect new developments and data. Thus, the qualitative approach was selected, situated in an environment driven by the researcher's interests, beliefs, skills, and resources, thereby inherently imbued with values (Creswell, 2009).

The qualitative approach was also chosen because it allows for an exploratory study of a new phenomenon. In the African context, including Ghana, knowledge of regulatory governance is limited; hence, an approach that will enhance a thorough understanding is required. According

to Bachiochi and Weiner (2004, p. 163), the qualitative method is necessary for exploratory study.

Moreover, the qualitative method was chosen for the current study because it allows the researcher to gather rich and in-depth data, which enhances a thorough understanding of the subject. Since it is impossible to study larger samples like quantitative studies, generalisation could be compensated by gathering rich and in-depth analysis of the phenomenon, industry, or context (Bachiochi & Weiner (2004).

4.4 Case Study Design

This study posits that regulatory governance in the electricity and urban water sectors presents critical implications for the country's political, economic, environmental and social policies. Therefore, an analysis of the quality of regulatory governance from the stakeholders' perspectives of PURC must acknowledge that these respondents have varied interests, which are also inherently competing in nature. This is best comprehended by applying the public interest and regulatory capture theories. Framed as a qualitative inquiry, the fundamental research questions revolve around first, understanding how the legal and institutional design of PURC aligns with critical attributes of effective regulatory governance. Second, how do stakeholders perceive and experience the responsiveness of PURC in Ghana's electricity and urban water sectors? Finally, to what extent does PURC provide regulatory credibility for its stakeholders in Ghana's electricity and urban water sectors?

How does PURC's institutional design align with key features of effective regulatory governance, including autonomy and transparency? Second, how responsive is PURC to the needs of its stakeholders? Finally, how credible is the PURC from the perspective of its stakeholders?

Various qualitative designs, such as ethnography, archival analysis, phenomenology, and grounded theory, were considered to address the intricacies. However, in alignment with the study's objective to unravel the deep-seated perspectives on the quality of regulatory governance of PURC, the case study strategy was chosen (Creswell, 2009; Denzin & Lincoln, 1995).

The case study design was deemed optimal for delving deep into the specific local contexts surrounding PURC's autonomy and transparency, regulatory responsiveness, and regulatory credibility. This design facilitates the use of multiple interactive and humanistic sources of information, including document reviews, in-depth interviews, and focus group discussions. Such an approach enables a thorough exploration of research questions and contributes to triangulation and data validation (Creswell, 2009; Yin, 2009).

Practical considerations further justified the adoption of the case study design, notably the constrained two-year timeline for completing the PhD thesis. Due to resource constraints, an exhaustive study covering Ghana's whole regulatory governance landscape within the timeframe was deemed impractical. The case study design, focusing on the PURC in the electricity and urban water sectors, offered a practically expedient approach to efficiently meeting the study's objectives (1997; Yin, 2009).

4.5 Sampling and Research Setting

The study used purposive and snowball sampling techniques to select cases and individual respondents for the study. The central assumption behind purposive sampling is that some instances are more appropriate for a study than others. The method was chosen because it allowed for selecting communities of unique locations and characteristics relevant to the study. It also enabled the targeting of respondents whose knowledge, experiences, and training made

them more suitable to offer helpful information that answered the study's research questions and maximised the possibility of making valid inferences (Creswell, 2009).

On the other hand, in the snowball sampling technique, researchers typically commence with a limited number of initial contacts, referred to as "seeds," who meet the research criteria and are invited to participate in the study. Subsequently, participants who agree are encouraged to suggest additional contacts who align with the research criteria and might be interested in participating (Saunders, 2012; Parker et al., 2019). These newly recommended contacts are then approached and, if willing, are invited to participate, and the cycle continues as they, in turn, recommend other potential participants. This technique was adopted for the current study because regulatory governance is a specialised field, and individuals with expertise in this area may need to be more easily identifiable through conventional sampling methods. A snowball sampling approach allows one to tap into the knowledge and insights of individuals with specific expertise in regulatory governance within the Ghanaian context.

Second, snowball sampling can facilitate access to key stakeholders who may not be publicly known or easily accessible (Cohen & Arieli, 2011). These stakeholders could include regulatory officials, industry experts, policymakers, or representatives from consumer advocacy groups. Leveraging existing connections can help identify individuals with firsthand knowledge of the regulatory landscape. Third, in regulatory governance, individuals often operate within interconnected networks. Utilising a snowball sampling technique leverages the network effects, enabling the researcher to identify and access critical informants who may directly or indirectly influence regulatory processes. These regulatory matters are often sensitive, and individuals within the regulatory landscape may be more willing to participate in the study if approached through trusted connections.

Snowball sampling, which relies on referrals and recommendations, can enhance trust and cooperation, leading to more open and candid responses (Parker et al., 2019). The research problem and objectives were decisive in selecting cases for the study. The study sought to analyse the quality of PURC's regulatory governance in the electricity and urban water sectors from the perspectives of its stakeholders. Three key factors were considered when selecting the stakeholders from where data was collected to cover various contextual factors. These were the geography or location, the organisation, and the industry to which the stakeholder belongs. The geography was critical because a literature review revealed that the successes of IRAs are affected by the specific local contexts in which they operate. Therefore, their activities may be context-specific, varying across communities and geographical regions. Therefore, attention had to be paid to these differences, which was done along the three geographical belts of Ghana.

Regarding the organisations and industry players, the researcher ensured that respondents were selected from crucial electricity and water industry players who had closer dealings with PURC and its activities. These included utility service providers regulated by PURC, government/elected politicians whose activities or job functions bring them close to PURC's mandate or activities, utility consumers, experts who are knowledgeable in regulatory governance, and the electricity and water sectors, businesses, and civil society organisations (CSOs) who are affected by the regulatory activities of PURC.

After considering these factors, the study was conducted in three regions of Ghana. In each of the regions, their capital cities were selected for the study. These include Accra, representing the southern belt; Kumasi, representing the middle belt; Tamale, representing the northern belt. These cities were selected because they are the principal cities of each of the three belts, and they carry the largest population of Ghana (Population & Housing Census, 2020). Moreover, they have a very high demand for electricity and urban water services. Accra is the capital city

of Ghana, with a high concentration of industries, businesses, and residential areas that depend on water and electricity for their daily activities. Kumasi is Ghana's second most populous city, with a high concentration of urban communities, industries, and agricultural activities. On the other hand, Tamale has agricultural communities with a growing urban population that depends on electricity and urban water services for livelihood.

Again, in terms of diversity, these regions have different characteristics regarding population, economic activities, and resource availability. Accra is a coastal area with access to sea transport and other resources, while Kumasi is known for its rich cultural heritage and natural resources such as gold and timber. On the other hand, Tamale has different challenges regarding access to electricity and water services and settlement patterns.

Also, the commission's investigation into various billing irregularities' complaints established that the utility service providers needed to pass credit sales adjustments of GHS10,198,678.2 to some of the complainants, with the utility service providers benefiting GHS 43,397,911.3 by way of revenue recovery, PURC Annual Report (2022, P.77). Therefore, these regions of study have the highest amounts for both utility service providers and consumers, benefiting from either the credit sales adjustment or revenue recovery, hence the need to be analysed to understand the pattern which would help in the analysing the effectiveness of the PURC in the regulatory governance space.

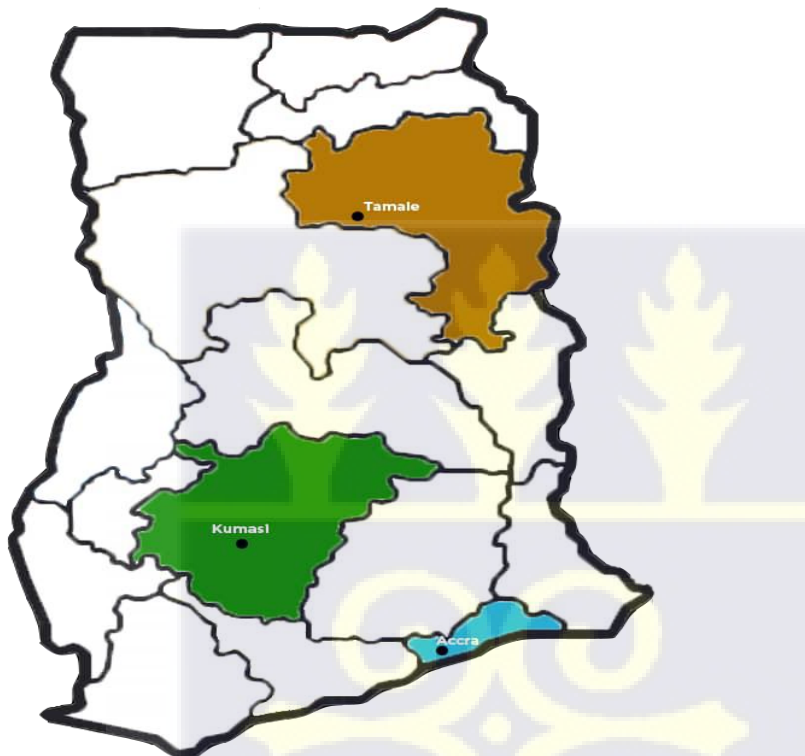
Furthermore, the Public Utilities Regulatory Commission (PURC) has regulated Ghana's electricity and urban water sectors since 1997. These regions have been under the PURC's regulatory oversight for a considerable period, and therefore, they provide an excellent case study for assessing the effectiveness of PURC's regulatory governance.

In addition, significant data is available on the performance of these regions' electricity and water sectors. The data include indicators such as access to services, quality of services,

customer satisfaction, and tariff levels, which are essential for evaluating the effectiveness of regulatory governance.

Overall, selecting the selected study location provided an opportunity to analyse the effectiveness of PURC's regulatory governance in different contexts, which can help inform policy and regulatory decision-making in Ghana's electricity and urban water sectors.

Figure 4.1: Study areas



Purposive and snowballing sampling techniques were used to select specific respondents. According to Ritchie and Lewis (2003), purposive sampling allows the researcher to select participants with characteristics similar to the study population, including socio-demographic characteristics, specific experiences or knowledge, behaviour, and role. Using this logic, 78 respondents were selected from the NEDCo, GWCL, and ECG, government officials, civil society organisations, experts, consumers of electricity and water utilities, and PURC Staff.

4.5.1 Inclusion and Exclusion Criteria

As indicated above, participants were purposively selected because they had experience and in-depth knowledge in Ghana's electricity or urban water sectors as experts, civil society organisations, government officials, consumers, officials of PURC, GWCL or ECG, and NEDCo. The logic followed were as follows:

First, utility service providers were selected because they are the primary clients of PURC, and they have direct contact with PURC in the regulatory processes. Additionally, they are at the direct receiving end of PURC's regulatory actions because they provide direct service to consumers. As a result, they are positioned to provide helpful information to the study. These include NEDCo, GWCL, and ECG. In this regard, officials such as Chief Executive Officers (CEOs), General and District Managers, and directors were selected from each organisation at the study setting's national, regional, and district levels.

Second, a consumer was selected only because he or she has ever presented a complaint or petition to PURC against a regulated body. Such consumers were identified at the regional offices of PURC with the help of the PURC complaint officers.

Third, experts were selected on the basis that they possessed significant expertise in the field of regulatory governance, energy policy, or water governance in Ghana. Additionally, they were to have substantial experience or knowledge about the work of PURC in Ghana's electricity and urban water sectors. In this regard, nine experts in Ghana whose rich research activities and impactful industry and advocacies continue to shape the regulatory policies in the sectors under study were contacted in their offices, and upon their consent, they were interviewed on agreed-upon dates. While five of them were easily accessed through the researchers' working relationship with them, the rest were accessed through referrals by the

initial five respondents, emphasising the combined usefulness of purposive and snowball sampling techniques.

Additionally, government officials were selected only because their work activities were related to the sector under study. In this regard, officials of the Ministry of Energy, the Ministry of Sanitation and Water Resources, the Energy Commission, and Members of Parliament who are either serving or have previously served on the Committee on Mines and Energy or the Public Accounts Committee of Parliament were selected. This was also one of the instances where the snowball sampling technique was deployed in the study. First, some members of parliament with whom the researcher had personal and working relationships were contacted and interviewed. Upon their recommendation and assistance, other government officials deemed more suitable and capable of providing rich information to the study due to their working involvement with PURC and regulatory governance in the sectors under study were contacted and interviewed.

In addition, respondents from civil society organisations (CSOs), interest groups, and businesses were selected because they were affected by PURC's regulatory activities. Some of them include the Association of Ghana Industries (AGI), the Consumer Protection Agency (CPA), and the Trade Union Congress (TUC). A distinctive feature of PURC is that the board has institutional representations selected from these key CSOs and interest groups. In this regard, three institutional representatives and two executives were selected for the study.

Finally, officials of PURC were included in the study so that the data could be enriched with information on processual expertise. Doringer (2020) identifies two types of exploratory expert knowledge: technical knowledge, which relates to particular knowledge of a field, for instance, technical applications, information, or data and processual knowledge, which captures knowledge based on practical experience in the institutional context of actions. During the field

interviews, it was realised that some of the interviewees, including some of the experts, provided technical knowledge in the field of regulatory governance and energy and water policy but did not demonstrate enough processual knowledge because they did not have much insight about the working procedures and specific work contexts of PURC. For example, it was common to hear them say, "As for that one, I do not have much knowledge" or "This question could be better answered by PURC officials in Accra." In some other instances, respondents provided experiential knowledge that needed to be verified by officials of PURC to establish the full facts.

Therefore, recognising the importance of technical and process knowledge in enriching the quality of research data, the researcher deemed it necessary to conduct follow-up interviews with key board members and staff of PURC. At some points, former board members were contacted and interviewed to gain a thorough understanding of some of the issues that emerged from the data collection. This helped clarify some of the responses offered during the interview. This also helped in answering the research questions sufficiently. In this regard, some board members, critical directors at the PURC national secretariat, and officials at the selected regions were included in the study.

On the other hand, participants with less than one year of work experience in their respective organisations were exempted because, in the researcher's view, they would not be able to share much relevant information due to their limited experience in the sectors under study.

These criteria were critical for ensuring that the participants selected for the study were knowledgeable about the regulatory effectiveness of the PURC in Ghana's electricity and urban water sectors and that they could provide relevant and reliable information for the analysis.

Döringer, S. (2021).

Table 4.1: Summary of the categories of participants interviewed

Organisation/ Industry	SouthernBelt (Accra)	MiddleBelt (Kumasi)	NorthernBelt: (Tamale)	Total
Consumers	10	8	5	23
Utilities Officials	10	4	2	16
Government officials	9	1	1	11
Experts	7	1	1	9
Civil Society	3	1	1	5
PURC Officials	9	2	3	14
Total	48	17	13	78

Source: Field Data (2023)

4.6 Data collection methods and sources

An underlying reason for choosing the qualitative approach for this study is its opportunity to use multiple data sources. Relying on multiple data sources offers a chain of evidence and facilitates triangulation, enhancing the validity and reliability of the data and findings (Bachiochi & Weiner (2004). The study employed several data collection methods, including face-to-face in-depth interviews, focus group discussions, and documentary reviews. Overall, the study collected data from both primary and secondary sources.

Interviews

Data for the study was mainly built through interviews, which is fundamental to qualitative research (Creswell, 2013; Myers & Newman, 2007). The semi-structured interview method was chosen because of the nature of the research objectives and related questions.

The flexibility of the semi-structured interviews allowed the researcher to give respondents enough room to provide personal accounts of issues while keeping them within the study's

boundaries (Yin, 2009). The method served as a valuable means of detailing the subjective perception of the quality of PURC's regulatory governance.

Interview guides were developed from the literature on regulatory governance (Maggetti, 2010; Stern & Holders, 1999; Burman & Zaveri, 2017; Jarvis & Savacool, 2011) and the study's conceptual framework (page 91).

To be sure, after developing the research instrument, the researcher contacted three accomplished professors in the field of regulatory governance, including Prof. Anton Eberhard who is Professor Emeritus, Senior Scholar at the University of Cape Town, and lead Advisory Board at the Power Future Lab at the Graduate School of Business; Professor Jeroen van der Heijden, Chair in Regulatory Practice at Victoria University of Wellington School of Business and Government; Fabrizio Gilardi, Professor of Policy Analysis, Department of Political Science, University of Zurich; and John Braithwaite, Emeritus Professor and Founder of RegNet (the Regulatory Institutions Network), now the School of Regulation and Global Governance (RegNet) at the Australian National University. Generally, they expressed satisfaction with the appropriateness of the data collection instrument and made helpful suggestions for improving it.

As a qualitative piece, the study was conceived as an inductive process. Therefore, although the interview guides were derived from literature, they only served as initial guides. They were made flexible to accommodate issues that emerged during fieldwork (Myers & Newman, 2007).

Focus Group Discussions (FGD's)

In addition to interviews, the researcher gathered data from the selected regions through FGDs. The strategy is helpful for qualitative research because it can rake in data that is not easy to generate in one-on-one interviews (Creswell, 2013). Besides its ability to cover several

participants within the shortest possible time, the FGDs served as an exciting forum for stimulating group-based thinking and discussions on the quality of regulatory governance in Ghana's electricity and urban water sectors. It served as a platform for bringing people of different backgrounds together to openly discuss their perspectives on the institutional design of PURC, its responsiveness, and credibility. The FGDs helped generate spontaneous and insightful research data due to participant interaction (Wong, 2008).

In all, three distinct Focus Group Discussions (FGD) involving at least five participants were conducted to understand the topic from diverse perspectives comprehensively. Each discussion lasted between 30 to 35 minutes. One FGD was conducted at the PURC regional office in Tamale, involving participants from PURC, NEDCO, GWCL, and consumers. The second FGD occurred in Kumasi, with participants from PURC, ECG, GWCL, and consumers who had previously complained to PURC. The third was held in the PURC office in Accra, involving officials from ECG, PURC, and a complainant attending a settlement meeting. Though an interview guide was designed to guide the FGDs, the researcher adopted flexible processes to respond to changing circumstances in the field. For instance, only the FGD in Tamale followed the entire set of questions due to data saturation and time constraints. At the same time, those in Kumasi and Accra were used to stimulate discussions on crucial areas highlighted in the face-to-face interviews.

Documentary Analysis

According to Morgan (2022, p.64), the documentary analysis approach in qualitative studies involves examining diverse document types, including books, newspaper articles, academic journal publications, and institutional reports. These could also be visual and audio sources. Morgan explains that document review provides a foundational understanding of a study, makes research flexible and easier, and is useful for triangulation in research.

The critical variables explored in the current study, including quality of regulatory governance, legal and institutional design, attributes of effective regulatory governance, responsiveness and credibility, have generated a lot of scholarly articles, reports, and documents. Therefore, the documentary review aspect of the study involved an extensive review of existing literature on these subjects, which lasted almost throughout the study. The review helped the researcher fully appreciate the issues, their related concepts, theories, and underlying dynamics. Documents reviewed included PURC laws, including Act 538 (1997), Act 800 (2010), and L.I 2413. In addition, PURC reports, including annual reports, the implementation of the cash waterfall mechanism validation reports for 2023, the draft report of PURC/MOE (2024) PricewaterhouseCoopers (PwC on compliance level with the implementation of the CWM guidelines), PURC Tariff Reckoner, Tariff estimator.

Additionally, books, journals, articles, internet reports —published and unpublished— and media reports were analysed. Other documents reviewed included official reports of international organisations, public utilities regulated by PURC, and government organisations connected to and working with the PURC. These sources provided a background understanding of the study, helping to identify gaps in the literature, framing the research questions, and providing insight into the analysis and reporting of the findings. In addition, while the PURC Acts provided the legal framework to ascertain the legal and institutional design, organisational structure, operating plan and regulatory objectives, the reports provided information for analysing its regulatory activities and actions in the electricity and urban water sectors.

4.7 Data Collection Process

The data collection process consisted of fieldwork and desk research of secondary data sources over eight months. The primary data collection process using field methods spanned over four months. It involved three main phases, with the first phase beginning with a pilot study in June 2023. Given that studies on regulatory governance in Ghana's electricity and urban water

sectors are generally limited, the pilot study was conducted before the main study to test and refine the content and procedures for data collection (Yin, 2014).

For ease of access, the pilot was conducted on some ECG and GWCL management and a few consumers in Accra. Preliminary responses from the pilot were added to the researchers' progress report and presented during a seminar. After the presentation, faculty members and other colleagues in the seminar observed that the language contained too many regulatory governance terms and should be reduced to make the questions more accessible for all respondents to comprehend. During the pilot, one expert also suggested that visibility should be added as one of the indicators for measuring transparency. This suggestion became one of the critical issues that emerged during the fieldwork.

The second stage involved the active data collection period, from July to September 2023, during which data was gathered in the principal cities of the selected regions. Subsequently, the third phase, occurring in October 2023, was dedicated to national-level data collection.

The third phase mainly focused on verifying some of the critical issues necessary for answering the research questions, yet the regional respondents needed all the facts or details. For example, some of the experts and managers of the utility service providers provided practical examples to support their answers. However, they needed help remembering some of the events' dates and detailed accounts. To glean these details, follow-up interviews were conducted with officials at the national offices of the PURC, the ECG, and the GWCL. Most importantly, the decision to interview officials of PURC was made because specific details necessary for answering the research questions were to be verified for correctness.

An M.Phil. graduate from the Department of Public Administration was recruited to assist with the data collection. He handled the recording device and helped write some responses as a backup.

Before commencing the primary data collection phase, an introductory letter was taken from the Department of Public Administration, University of Ghana, and dispatched to various organisations involved in the study. These letters sought official consent for the data collection process. Upon invitation, the researcher met with the heads of each of these organisations. During these meetings, the purpose and procedural details of the study were elucidated. For example, the heads of the organisations were requested to appoint respondents based on their expertise, experiences, and knowledge of the phenomenon under investigation. These discussions were held via telephone with the individual respondents, such as the experts and consumers.

The qualitative interviews and focus group discussions were selectively conducted solely in Accra, Kumasi, and Tamale. Accessing officials of various organisations for interviews and FGDs posed minimal challenges. They voluntarily agreed to participate in the study and invited the researcher on a mutually agreed-upon date and time. However, reaching out to consumers who had previously lodged complaints with PURC proved arduous. Fortunately, individuals with fresh cases were conveniently accessed at PURC regional offices in Accra, Kumasi, and Tamale. Home visits were undertaken in different study areas for those already settled cases. This proved to be the most demanding aspect of the data collection process. Their telephone contact details were obtained from PURC regional offices, and, with the assistance of complaint officers from PURC, participants were scheduled for interviews.

However, in Kumasi, many consumers who had previously complained to PURC were in Adum. This was also one of the instances where the snowball sampling technique was applied. Thus, the process became easier because interviewees helped by recommending other consumers who had previously reported cases to PURC against the utility service providers. Interestingly, it was observed that these respondents became aware of PURC primarily because

the PURC complaint officer resided in their community. Their familiarity with PURC stemmed from testimonies and recommendations shared by neighbours.

The confidentiality and anonymity of the information provided by participants were guaranteed. On average, each interview lasted between sixty (60) and ninety (90) minutes. The interviewees were led through a series of open-ended interview questions. On the scheduled day of the interview, the researcher read the purpose of the interview and gave the respondent the option of participating or not. Participants were also asked for permission to record their responses using an audio device.

In total, seventy-eight (78) one-on-one in-depth interviews were conducted to gather personal perspectives from various stakeholders of PURC across selected geographical locations. The data collection began at the regional level, involving interviews with regional officials of PURC, utilities, consumers, opinion leaders, and assembly members. By the 43rd interview, it was apparent that new insights were scarce, prompting further inquiry at the national level. The interviews continued until data saturation was achieved at the 78th interview. These one-on-one interviews were capped with three FGDs, with one each conducted in Accra, Kumasi, and Tamale. The demographic details of respondents are presented in the table below.

4.7.1 Demographic Details of Respondents

Table 4.2: Demographics

Characteristics	Frequency	Percentage
Sex		
Male	50	64.10
Female	28	35.90
Total	78	100

Number of years working in their organisations/sector		
3-9	12	15.4
10-19	30	38.5
20-29	26	33.3
30-39	10	12.6
Total	78	100

Academic Qualification		
SSCE/JHS/Primary	4	5.12
Diploma/Bachelors	24	30.80
Masters	36	46.13
PhD	14	17.95
Total	78	100

Source: Field Data (2023)

Table 4.2 is revealing in many ways. First, the results indicate that participants in the study were predominantly male, indicating a significant underrepresentation of women's perspectives. This gender imbalance suggests that the study may not adequately capture the views and experiences of women in the field. As a result, the study may lack diversity and overlook important gender-specific insights, which is a limitation.

On a positive note, the results highlight that respondents had substantial work experience, ranging from 10 to 30 years. This depth of experience can be a strength of the study, as it implies that participants likely responded with a high level of expertise and insight, which can contribute to the quality and depth of the findings.

Similarly, the results indicate that more than half of the participants held postgraduate degrees, such as master's and Ph.D. qualifications. This is another strength of the study, suggesting that participants deeply understand the issue under investigation. Their advanced degrees enabled them to provide nuanced and in-depth responses to the research questions.

In summary, the study benefits from the expertise and educational qualifications of the participants but is limited by the underrepresentation of women's perspectives.

4.8 Limitations

While qualitative research offers rich insights and contextual understanding, it is not without limitations. Here, the researcher acknowledges the weaknesses of qualitative design and explains how those weaknesses were mitigated.

4.8.1 Weaknesses of the qualitative approach

Firstly, qualitative research is often criticized for its subjective nature, as researchers' biases can influence data collection and analysis (Denzin & Lincoln, 2011). Second, it has limited generalizability. Thus, qualitative findings may not be generalizable to other contexts due to the specific nature of the study (Merriam, 2009). Third, qualitative research often involves smaller sample sizes, which can limit the scope of findings (Creswell, 2014). Finally, there is the challenge of data analysis. Qualitative data analysis can be time-consuming and challenging, with multiple interpretations possible (Bogdan & Biklen, 2007).

4.8.2 Validity and Rigour

Ensuring rigour and validation in qualitative research poses a significant challenge. Yin (2009) recommends explicitly tailored strategies for case studies to address this concern. These strategies encompass utilising multiple sources of evidence, establishing a chain of evidence, employing pattern matching, integrating theory in single case studies, implementing a case study protocol, and developing a case study database.

The researcher took the following measures: to begin with, the issue of subjectivity was addressed by employing reflexivity throughout the research process, acknowledging the researcher's bias and assumptions (Finlay, 2002). Furthermore, the researcher used triangulation, combining multiple data sources and methods to increase validity (Denzin, 1978). Triangulation, recognised as a fundamental approach for rigour and validity in qualitative case studies, underpins these strategies (Yin, 2009).

Regarding the limited generalizability, the researcher clearly defined the research context and boundaries, facilitating transferability to similar contexts (Lincoln & Guba, 1985). The issue of small sample size was addressed by using purposeful sampling where participants with expertise and experience relevant to the research question were selected for the study (Patton, 2002). Additionally, the researcher ensured data saturation, collecting data until no new themes emerged (Glaser & Strauss, 1967).

Finally, the data analysis challenges were addressed by using coding and memoing techniques to organize and analyze data systematically (Charmaz, 2006) and engaging in peer debriefing, discussing findings with colleagues to increase validity (Creswell, 2014).

Essentially, in this study, the assurance of rigour and validity primarily centred on utilising multiple sources of evidence. The predominant data from interviews was complemented by information gathered from focus group discussions (FGDs), scholarly publications, official documentation, and materials available on the Public Utilities Regulatory Commission (PURC) website. Beyond generating diverse data types, these sources functioned as a cross-check for emerging themes within each data stream. The interview process considered multiple perspectives, involving individuals with distinct viewpoints. This study, therefore, adopted a triangulation approach, interviewing various respondents on the same topic and integrating multiple sources of evidence in crafting the final report. This approach aimed to diminish the

possibility of misinterpretation and facilitated examining information from different perspectives (Creswell, 2009; Yin, 2009).

To validate that the reported data accurately reflected what was collected, two key informants critically reviewed the draft report before the final version was prepared. Additionally, field notes were diligently recorded as supplementary information before concluding the fieldwork, further contributing to the rigour and validation of the study.

4.9 Data Analysis

Data analysis examines, classifies, illustrates, and evaluates data through logical and analytical reasoning. It is a thorough search for meaning from raw data to allow for their scientific processing so that whatever data is collected can be effectively communicated (Hatch, 2002, p. 148). For qualitative studies, a broad range of data analysis methods are available. These include interpretative phenomenological analysis (Smith & Osborn, 2003), conversation analysis (Hutchby & Wooffitt, 1998), grounded theory (Glaser, 1992; Strauss & Corbin, 1998), discourse analysis, and thematic analysis (Braun & Clarke, 2006).

The study employed the thematic analysis method: an iterative and reflexive procedure for identifying, classifying, analysing, interpreting, and expressing patterns in a data set (Attride-Stirling, 2001; Braun & Clarke, 2006). The method was chosen for two important reasons. Firstly, it offered the researcher theoretical freedom and flexibility in providing a rich, detailed, yet complex account (Braun & Clarke, 2006) of the social forces behind the decision to enrol. Secondly, it provided a valuable and nuanced approach to reducing the large volume of data into more meaningful themes that facilitated easy analysis and interpretation. The audio data was carefully stored on a computer and a pen drive to ensure data security. Subsequently, these audio recordings were rigorously transcribed verbatim into written text.

In analysing this transcribed data, the research procedure followed the systematic framework proposed by Braun et al. (2019). This framework comprises several critical stages for comprehensively analysing and interpreting the data.

The initial step involved acquainting oneself with the data. The researcher was fully immersed in the details of the information, striving to attain a deep and broader understanding of the content. This familiarity with the data's nuances and overall scope was necessary in preparation for subsequent analytical phases.

Moving on to the second stage, the researcher generated initial codes. In this phase, the researcher systematically assigned relevant codes to specific data features that stimulated his interest. These initial codes served as the foundation for the subsequent stages of analysis.

The third stage entailed exploring themes within the data. Rather than assigning codes individually, the researcher focused on identifying broader themes from the data. This involved grouping and categorising relevant codes under these overarching themes.

The fourth stage focused on a thorough review of these emergent themes. During this evaluation, the researcher made decisions about consolidating specific themes and separating others, refining the thematic structure of the analysis.

Subsequently, the fifth stage entailed defining and labelling these themes. Here, the researcher clarified and refined the themes and delved into the data contained within these themes to carry out a more in-depth analysis.

The final stage involved the creation of a comprehensive report. In this phase, the researcher fully developed the identified themes, which formed the basis for the ultimate analysis and moved on to write the report. This report encompassed a detailed account of the research findings and provided a coherent analysis representation.

In sum, following Braun et al.'s (2019) methodology, the research process involved a careful and systematic approach, ensuring that the data was thoroughly analysed, resulting in a robust and well-documented analysis.

4.10 Quality Assurance

The researcher adhered to Lincoln and Guba's (1985) evaluative criteria to uphold the integrity of the research procedure, mainly focusing on the steps taken in data collection, analysis, and interpretation. The evaluative standards encompass credibility, dependability, transferability, and conformability, each discussed below.

Several measures were implemented to ensure credibility, which evaluates the trustworthiness of research findings and the accuracy of conveying participants' responses. Extensive fieldwork over three months facilitated meaningful participant engagement, ensuring sufficient data gathering. Additionally, the researcher employed multiple data collection and analysis methods to enhance the accuracy of reported findings and interpretations. The utilisation of a diverse range of data collection techniques, multifaceted approaches to data collection, and a six-phase data analysis procedure collectively bolstered the credibility of the research.

Dependability, assessing the likelihood of similar results in future studies using the same processes, is addressed by thoroughly discussing and recording the research process. Detailed accounts of data collection and analysis strategies, processes, timelines, durations, organisations, cases, and interviewees are documented for scrutiny, enabling assessments of research practices and their quality.

The transferability standard concerns the applicability of study findings to other contexts, emphasising qualitative and context-specific generalisation rather than statistical generalisation. The study justifies the selection of cases and respondents by comprehensively describing the research setting's context. It ensures transferability by incorporating multiple

views, processes, and experiences related to regulatory governance. The detailed reporting of data sources, fieldwork processes, and interview procedures contributes to achieving the criterion of "thick description."

Conformability addresses bias, preferences, values, and research limitations by examining the impartiality of methodological choices. The researcher relied on multiple stakeholder perspectives, clearly articulated and justified theoretical, methodological, and analytical choices, and acknowledged the interpretive nature of the study. The study aimed to balance participants' interpretations with analytical integration into existing literature and theory, extending findings beyond the study's context. The study's limitations are also acknowledged in the concluding chapter.

4.11 Ethical Considerations and Research Clearance

In keeping with social science research ethics, some ethical principles were observed to protect the confidentiality, anonymity, interest and safety of all respondents and organisations involved in the study. This study complies with the ethical policies of the research of the University of Ghana, which include informed consent, no pressure on individuals to participate, respect for individual autonomy, avoidance of harm, and maintenance of anonymity and confidentiality.

Ethical clearance with a number ECH 220/22-23 was first sought from the University of Ghana by an application to the ethics committee. Supporting documents added to the application included an introduction letter from the Department of Public Administration and the researcher's lead supervisor; a research proposal with the purpose of the research and the methodology explained in detail; the research protocol; and an outline of the data collection process. The final clearance, upon receipt, was forwarded well in advance to the national offices of the PURC, ECG, GWCL, and NEDCo. The researcher waited until the regional and district offices selected for the study had been notified. The objectives, potential risks, and

benefits relating to the study were all explained to them in advance to obtain their consent. These gave the institutions ample time and information to decide whether to participate (Johnson & Christensen, 2008).

The research values of confidentiality and voluntary participation were very much observed during interviews. Accordingly, respondents were not required to indicate their names and were informed of their freedom not to answer questions they deemed too sensitive. They were also informed of their right to postpone or truncate interviews at their convenience. During the interviews, due consideration was given to confidentiality and integrity, such that a mutually beneficial agreement was reached about the use of data, its analysis, and dissemination. They were assured and shown copies of draft reports for consent before the final report was compiled (Carling, 2013; Tracy, 2010). This study considered the importance of avoiding plagiarism and adhering to copyright regulations in research.

Therefore, the University of Ghana's research ethics policy, which forbids plagiarism, piracy, falsification or the fabrication of results at any research stage, was a central guiding line in this study. Therefore, materials are duly acknowledged and referenced to ensure compliance with these ethical standards.

Though utmost effort was made to ensure that both males and females had equal opportunities to participate in the study, this was not achieved because the officials of the various organisations, which the heads of the participating organisations recommended, based on the primary criteria that participants must have knowledge and expertise in the field of study, happened to be predominately, males. Thus, the first consideration for the study was to purposefully select participants based on their position, expertise, and experience with the subject under study. Unfortunately, the majority of such respondents were males. The

researcher could select more female participants only on the side of the consumers to ensure gender balance.

4.12 Limitations

While the study is commended for its rich data due to the involvement of top officials from the government —ECG, PURC, GWCL, CSO/Interest groups, experts and consumers— thereby enhancing the depth and quality of the study’s findings, male participants dominated the study, indicating a gender imbalance. The researcher recognises this as a limitation regarding comprehensiveness exclusivity because the perspectives and experiences of females are underrepresented in the research. When this was identified after the initial analysis, the researcher took steps to reduce this bias by following up with a few qualitative interviews with selected female respondents. This notwithstanding, no new information was received, suggesting no significant variations between the views of males and females on the subject under discussion.

4.13 Chapter Summary

This chapter delineated the philosophical and methodological underpinnings of the study. The research embraces subjectivist ontology and interpretive epistemology. Adopting a subjectivist ontology facilitated a comprehensive exploration of stakeholders’ perspectives on the quality of PURC’s regulatory governance. The interpretive epistemology empowered the researcher to conduct the study, relying on the subjective interpretations of the participants and the researcher within the broader context of the study. The chapter delved into the rationale for selecting a qualitative approach and its associated strategies, substantiating why they are most fitting for studies of this nature. Additionally, it examined the use of semi-structured interviews, documentary reviews, and focus group discussions (FGDs) as the chosen methods for data collection. A brief overview of the data analysis process, as detailed in Chapter Five,

was also provided. This chapter established the study's philosophical foundation and offered justifications for the methodological decisions.



CHAPTER FIVE

EFFECT OF THE PURC'S LEGAL AND INSTITUTIONAL DESIGN ON THE EFFECTIVENESS OF REGULATORY GOVERNANCE

5.1 Introduction

Despite the proliferation of independent regulatory agencies across the globe, there needs to be a more significant gap in the existing research literature regarding a comprehensive assessment of independent regulatory agencies across the globe, particularly in the context of its regulatory governance quality. For example, previous studies have yet to fully explore the alignment of IRAs' legal and institutional design with essential features, including autonomy, transparency, and ineffective regulatory governance. Also, previous studies have not investigated how well IRAs demonstrate regulatory responsiveness to stakeholders. Additionally, the existing literature needs an in-depth analysis of IRAs' performance regarding their ability to provide regulatory credibility for its stakeholders. Such assessments are necessary to ascertain their effectiveness in their regulatory roles.

In light of these lacunae, the primary purpose of the current study was to conduct a comprehensive qualitative investigation into the regulatory governance of the Public Utilities Regulatory Commission (PURC) in Ghana, assessing the alignment of its institutional design and legal framework with recognised features including autonomy and transparency on effective regulatory governance, assessing its responsiveness to stakeholders in the electricity and urban water sectors, and examining the perceived level of regulatory credibility provided to stakeholders.

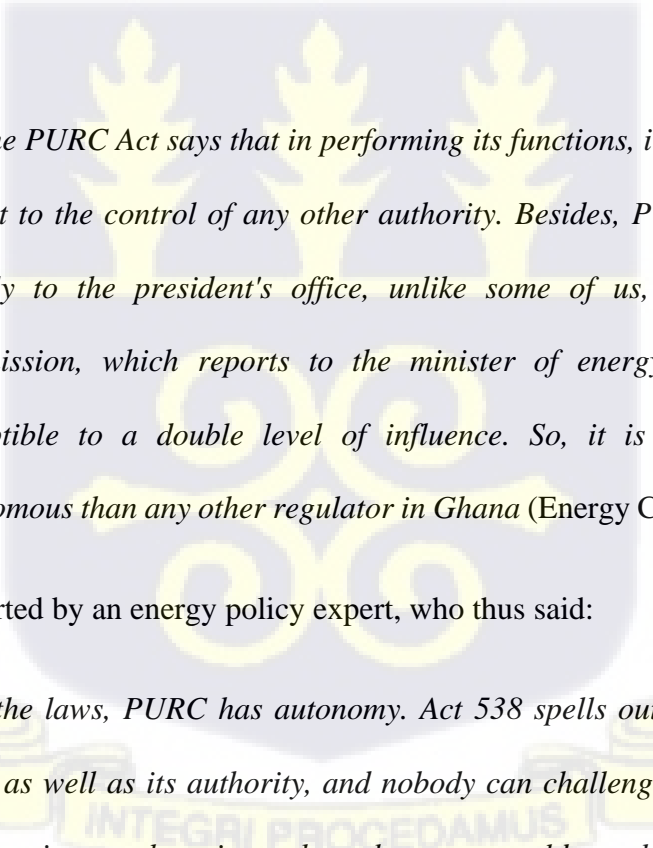
This chapter presents the findings of the first research objective, which sought to assess the extent to which PURC's institutional design aligns with regulatory autonomy and transparency for effective regulatory governance. The findings of this study are presented below:

5.1.1 Regulatory Autonomy of PURC

The findings indicate that the institutional design and legal framework of PURC give it a commendable managerial, financial, and legal autonomy. Unfortunately, there is a gap in terms of its structural autonomy. Each of them is explained below.

5.1.1.1 Managerial Autonomy

Managerial autonomy manifests in two main ways: decision authority and rule authority. Regarding decision authority, the findings demonstrate that the legal and institutional design of PURC make it autonomous. In that the laws clearly state that PURC shall be independent in performing its functions and shall not be subject to the control of any other body. For example, an official of another regulatory institution in the energy sector explained this in the following words:



Yes, the PURC Act says that in performing its functions, it shall not be subject to the control of any other authority. Besides, PURC reports directly to the president's office, unlike some of us, the Energy Commission, which reports to the minister of energy, makes us susceptible to a double level of influence. So, it is much more autonomous than any other regulator in Ghana (Energy Commission).

This view was supported by an energy policy expert, who thus said:

Yes, per the laws, PURC has autonomy. Act 538 spells out its roles and functions as well as its authority, and nobody can challenge its authority except when it goes ultra vires, where the courts could marshal its power of judicial review (Expert, 2).

Additionally, the laws give PURC delegated power of legislation. The following words of one of the experts support this view as follows:

Besides the Act, PURC has delegated legislative powers to enact rules and regulations to run the commission effectively. Several legal instruments (LIs), such as LI2413, guide how PURC operates, and PURC itself formulated these (Expert,1).

These responses underscore how the legal and institutional design of PURCs gives them managerial autonomy through decision and rule authority. These are seen in the following ways. First, in performing its functions, the laws guarantee that PURC shall not be subject to the control of any other authority. Second, making it report directly to the president's office instead of the sector minister reduces the influence level. Finally, the laws give PURC the power to formulate its regulations to enable it to achieve its regulatory functions.

5.1.1.2 Financial Autonomy

The findings indicate that PURC has suffered from severe financial challenges until recently. Thus, PURC's financial autonomy has improved with the establishment of a regulatory levy through Act 800 in 2010. The levy provides a stable funding source, allowing PURC to independently finance its operations and infrastructure. In the words of one energy policy expert, “PURC, unlike previously, possess financial autonomy now through the regulatory levy and other sources of funds from donors” (Expert, 5).

A regional manager hinted that PURC was financed by the president's office some years ago. Later, it was moved to the Controller and Accountant General. During those days, it suffered severe budgetary problems, making it unable to finance its stated plans. However, in 2010, Parliament passed Act 800 to establish a regulatory levy for collecting public utilities. That has given a more reliable source of funding for PURC than before. He testified thus:

For example, I have never had any challenges funding my regional activities as a manager. I only have to ensure that I have gone through the procedures laid down regarding the action plan and budget with its justification (PURC Regional Manager, 2).

These responses emphasise that unlike previously, PURC now has a reliable source of revenue, making it financially autonomous.

Despite this reliable financial source, the analysis shows that PURC's financial autonomy is threatened by inherent weaknesses in implementing the regulatory levy.

An energy expert with many experiences and an industry player has this to say;

I had, on several occasions, requested information about the payments of regulatory levy from the PURC and ECG but could not get satisfactory explanations, for example, why, for May, June, and July 2023, the levy has not been paid, puts pressure on beneficiaries, especially the Independent Power Producers (IPPs), who have threatened to shut the generators if their invoices are not honoured by ECG (Expert 2).

According to respondents, there are instances where the utility service providers need to demonstrate transparency in the collection and disbursement of the total regulatory levy amount. This situation happened between March and July 2023, when ECG failed to pay PURC and other beneficiary players the regulatory levies they had collected. This could have had severe ramifications for the activities of PURC if PURC had not taken some proactive measures against such happenings. One regional manager of PURC said this in the following words:

Yes, the utilities' actions can affect our finances. If ECG refuses to declare the accurate collections they have made, our finances will be reduced, and if they refuse to credit the cash waterfall, we will have no money to finance our budget. Currently, this is happening. For close to three months, ECG has yet to credit the cash waterfall. It is a big challenge (PURC Regional Manager, 3).

One board member of PURC supported this view in the following words:

That is what happens when you get some bad players in the system. As it stands now, ECG still needs to credit the cash waterfall, so there is no money. If it had not been for PURC always to be proactive, we would have stopped. Some of these possibilities led to the idea of a cash waterfall. We only need to improve upon it (PURC Board member, 2).

Another government official shed light on a concerning aspect of this situation. He revealed instances where PURC had to actively pursue ECG to credit the regulatory levy into its account. He warned that this could be a tool for regulators to manipulate PURC. In his own words:

There is only one catch, and the cash waterfall mechanism should be improved. At a point, PURC was chasing NEDCo and ECG to pay some of their outstanding regulatory fees (Government official, 1).

These revelations emphasise that though PURC has a very dependable source of funding through the regulatory levy, there is a critical need for transparency on the part of the utilities, particularly regarding the accurate declaration of total collection and timely disbursement to PURC and other players.

5.1.1.3 PURC's Legal Autonomy

Another aspect of autonomy possessed by PURC is *legal autonomy*. According to the findings, PURC is a legal creation, and the laws give it a legal personality. Another policy expert explained this in the following words:

Yes, PURC is legally autonomous because it is a creation of law. The PURC Act, 1997 (Act. 538) stipulates the independence of the commission. In addition, the commission has developed several legislations, like LI 2413 and LI 800 that provide rules regarding utility service provision for utilities and consumers (Expert, 5).

This view is supported by a Member of Parliament who thus said:

Yes, PURC has a statutory existence, and to a large extent, effort has been made through the laws to make it independent, so you find PURC alone determining tariffs in consultation with key stakeholders. There is no evidence to suggest otherwise (Government official, 4).

These responses are samples of the respondent's views emphasising the legal autonomy of PURC.

Despite these commendable features, the analysis also reveals that, in practice, several factors continuously threaten the managerial and financial autonomy of PURC. First, PURC's structural autonomy is inherently weak. Second, there are implementation challenges of the regulatory levy. These are explained below.

5.1.1.4 Weak Structural Autonomy

The findings show that despite the managerial, financial, and legal autonomy guaranteed through the legal and institutional framework of PURC, the structural autonomy of PURC

could be more robust due to several limitations in the legal and institutional design of PURC. These limitations include the appointment procedure, insufficient office security, transitional gap, and reporting to the president's office. Each of these limitations are explained below:

Firstly, regarding the appointment procedures, the analysis shows that the laws give the president of Ghana broad power to appoint the board members, including the executive secretary. However, the laws need to define the qualification criteria clearly. This gives the president so much leverage over the appointment of board members. Out of the nine (9) board members of PURC, the president appoints five (5). Respondents think that this gap allows the president to influence the activities of PURC. For example, another member of Parliament (MP) said:

We have given so much power to the executive, where the president appoints nearly 10,000 people for boards and the heads of institutions. So, the heads of the institutions have become politically exposed, and they have to acquiesce to the appointing agency instead of helping us build more robust institutions (Government official, 2).

These responses emphasise that presidential appointments of more than half of the board members, including the board chairman and the executive secretary (ES), significantly affect the opportunity to build strong institutions since they expose the organisation's heads to political interference.

Secondly, the analysis indicates that the PURC law needs to sufficiently guarantee the security of board members' offices. Besides, nowhere in the laws are the board members, including the ES and the board chairman, shielded from arbitrary dismissal by the president. This was seen in the words of one board member, who said; the autonomy of PURC is also affected by the president's ability to sack the executive secretary at will (PURC Former Board Member, 2).

Thirdly, the study's findings reveal that PURC reports to the president through the Chief of Staff, limiting administrative autonomy. Respondents think that this gap makes PURC susceptible to potential political interference. For example, one PURC board member opined as follows:

Regarding decisions, it is PURC; indeed, there is potential for influence. They appointed you so they can still engage you on decisions that will not be favourable (PURC Board Member, 1).

This response underscores the influence of the appointing authority on the decisions of PURC.

Finally, the analysis identified that there needs to be a straightforward transition procedure for the board members, which will lead to operational challenges during government changes. For example, respondents opined that the delay in appointing a new board after the 2020 election affected PURC's tariff decisions. For example, one policy expert supported this view in the following words:

I also observe that there needs to be a straightforward transition procedure. So, in the event of a change of government, if the appointing authority does not give PURC a board or, in a written letter, gives the secretariat the go-ahead to continue, the commission cannot operate (Expert, 6).

In conclusion, the study finds that while the legal and institutional design of PURC gives it commendable managerial, legal, and financial autonomy, it still has a fragile structural autonomy. As a result, in practice, PURC suffers from political interference or influence.

In addition to these findings, the current study finds that, first, elected politicians are perceived to influence PURC decisions, especially on tariffs. For example, one former top executive of one of the utilities who is currently an energy consultant narrated that:

Sometimes, we submit proposals requesting a specific percentage increase based on the prevailing economic factors. PURC takes our proposal and analyses to see whether our request is justifiable; they consider the economic factors as well as the interests of the consumers. When they decide, they seek the presidency's approval before they decide. Then, the government will look at how this will affect its political fortunes (Expert, 3).

Those who hold this view cited an instance in 2018 when His Excellency Nana Addo Dankwah Akuffo Addo, in a meeting of the 8th Salon Academy of the National Association of Beauticians and Hairdressers, announced a tariff decrease. The decrease was captured in the 2018 national budget even when PURC had not finished its public engagements. In response, PURC had to announce a downward tariff review in line with what the president had announced earlier.

Similarly, the findings suggest that past leadership instances demonstrate PURC's commitment to resisting undue influence despite political interferences. For example, during the regime of ex-president John Agyekum Kuffour, the president sought to get PURC not to announce an upward tariff decision they had arrived at, but PURC boldly declined. When the government insisted on the reduction, the then board chairman of PURC, Mr. Andrews Kwame Pianim, resigned. In support of the view that PURC has demonstrated commitment towards resisting political interference, one Member of Parliament who is also a former Minister of Energy narrated that he once called the then executive secretary (ES) in connection with tariff reviews, but to his surprise, the ES refused to oblige to his demand. In his words, he said:

As a minister of energy, I recall calling the then Executive Secretary of the PURC to inquire about tariffs. To my surprise, they told me that they wanted to be able to continue when it came to tariff setting (Government official, 1).

The resignation of the former board chairman and the testimony of the Member of Parliament emphasises PURC's commitment to delivering regulatory credibility for its stakeholders.

First, the government has made a significant commitment to pass laws to create and guarantee PURC relative managerial, legal and financial autonomy. However, there is a stark contrast between the legal autonomy granted and the practical autonomy exercised by PURC. Political interference, particularly in tariff decisions, emerges as a significant challenge. Respondents, including a former board member and an energy expert, suggest that decisions, especially those unfavourable to the executive, face scrutiny and potential rejection. The perception that the presidential approval before tariff announcements implies a departure from the intended autonomy outlined in the laws.

Despite these challenges, there are instances where PURC have resisted political pressures. The study highlights a historical case where the board chairman resigned in the face of government interference during ex-President John Agyekum Kuffour's era. This demonstrates PURC's commitment to maintaining its regulatory mandate in the face of external pressures.

In conclusion, the findings highlight the nuanced nature of autonomy within the PURC. While there is a legal framework establishing autonomy, challenges in its practical implementation, especially concerning political and financial aspects, necessitate a deeper understanding.

5.1.2 Transparency of PURC

Transparency was one of the key attributes used to measure the quality of PURC's legal and institutional design. The findings show that PURC has implemented several mechanisms to enhance its transparency. These mechanisms are presented below.

5.1.2.1 Public consultations on tariff decisions

As part of transparency processes, PURC invites public utilities to submit tariff proposals for consideration, or utility service providers can trigger the process. After this, PURC organises

public forums, such as town hall meetings, to get the utilities to explain the proposal's rationale. PURC then allows the public to share their views on the proposals submitted by the utilities. After these processes, PURC determines the tariff based on the submissions made by various stakeholders and the other socio-politico-technical factors at the time. This process is seen in the words of one of the directors of PURC, who said:

The law is explicit in terms of tariffing and other things. PURC takes tariff proposals from the utilities, publishes those proposals and organises public hearings to hear the opinions of key stakeholders, particularly consumers. All these things are done before PURC determines the final tariff. In doing this, PURC considers the economic situation at the time (PURC Director, 2).

The director further explains that PURC allows its stakeholders to initiate tariff adjustments. He said that normally, people think only PURC initiates tariff adjustment, but utilities can also do so (PURC Director, 2). This assertion indicates that PURC also gives the utilities the right to initiate tariff review by submitting a review proposal to PURC.

A district manager of ECG confirmed this view, explaining that ECG conducts stakeholder consultations before making tariff decisions. In his words he thus said:

From where I sit, PURC has been very transparent; they bring matters, they ask for your response, okay, they ask you to do your checks. Sometimes, they also come and do their independent check. So, it is clear they do not undertake any clandestine reasons; they are very transparent (ECG, 11).

One regional chief manager of Ghana Water Company Limited also said thus:

I have worked as a Ghana Water Company Limited manager in three regions. I have shared my experience with the PURC, and they are very transparent in their tariff decision process and complaint management mechanism, from when they receive the complaints from the complainant to how the complaints are finally resolved. PURC is one of the most responsive and transparent public sector institutions I have dealt with in the last two decades in Ghana (GWCL, 1).

This was also supported by a consumer of ECG, who thus said:

Yes, they are super professional for public consultations on tariff reviews. PURC has procedures and mechanisms to consult a wide range of stakeholders. The commission is excellent when it comes to Stakeholder Engagement. The commission also has regular public hearings for consumers and targeted industry players to respond formally to public submissions or requests, and it has done well in this regard over the years (Consumer, 14).

Another consumer added that he had personally attended one engagement forum of PURC and had even covered stories from the meeting for a media house. In his words, he said:

The commission has one of the best strategies for stakeholder engagement. The commission also has regular public hearings, forums, and meetings with captains and industry players. The commission has the mechanisms to respond formally to public submissions or requests and has done well over the years. I have been

privileged to participate in and cover stories of such Stakeholder Engagements

(Consumer, 4).

These responses from PURC staff, utilities, and consumers underscore a system of transparency and fairness in the tariff-setting and complaint-resolution processes of PURC.

5.1.2.2 Publication of tariff proposals and decisions

Another formal mechanism PURC implements to enhance transparency is the publication of tariff proposals, justifications, and position papers detailing the final tariff decisions. This practice ensures the decision-making process is transparent and stakeholders can access the reasoning behind the commission's tariff-related determinations. These are published on its websites, mass media, and social media handles. In the case of the tariff decision, PURC, in addition to the mass media and other channels, is required by law to publish it in the gazettes. PURC has done very well in this regard, as it has consistently followed laid-down procedures to ensure that it communicates its activities and decisions to the public, including the reasons behind those decisions. For example, one expert thus said:

In this regard, the commission has done well in publishing the decisions, especially in recent times. They have even used modern technology, including social media and media engagement, to educate people on the factors they considered in arriving at those tariff decisions. These are all measures to enhance transparency (Expert, 3).

A member of the civil society organisation also commended PURC when it comes to the publication of tariff proposals and final decisions:

I have personally followed the activities of PURC when submitting tariff proposals to utility service providers for tariff reviews. The

PURC has been very transparent, as the documents are available to the public, and the gazettes are also available on their website (CSO 2).

This statement underscores the efforts PURC makes to enhance transparency. For example, it goes beyond formal communication options to include its website and social media technologies to reach out to wider stakeholders to explain the justifications for the tariff decision.

5.1.2.3 Institutional representation on the PURC board

Another mechanism PURC has used to enhance transparent processes is institutional representation on its board. Respondents explained that the PURC board is composed of people who represent various interests, including one representative each nominated by the Trade Union Congress (TUC), the Association of Ghana Industries (AGI), and domestic consumers, as well as four persons with knowledge in matters related to the functions of the commission. This arrangement is one of the mechanisms of transparency. For example, one consumer said:

The composition of the commission's nine-member board is designed to bring a diverse and well-rounded set of skills and perspectives to its leadership. On the board, industry, labour, government and people with knowledge in the sector are represented so that the interests and concerns of key stakeholders are directly represented at the decision-making level. This is a mechanism for accountability and transparency (Consumer, 3).

One regional manager of PURC also said: “I think that the fact that the board has representations of key stakeholders’ signals transparency” (PURC Regional Manager, 3).

This response emphasises how institutional representation on the board serves as a means of ensuring transparency. However, respondents think the number of stakeholders on the board needs to be widened to include more stakeholders such as chiefs, civil society, the media, and the utilities being regulated. This view aligns with the suggestion made by one ranking member of Parliament who also serves on the committee on mines and energy. In his words, he said:

Yes, the idea of institutional representation is a fantastic one. However, I propose expanding the stakeholders to include more interests, such as those who are being regulated—CSOs, media, chiefs, etc. (Government Official, 2).

These responses highlight institutional representation as a mechanism of regulatory transparency. They further indicate that the number of representatives should be expanded.

5.1.2.4 Transparency through the publication of decisions and their justifications

Another mechanism PURC uses very well is consistently publishing its decisions and activities on several mass media platforms, such as the website, television stations, newspapers, the Ghana Gazette, and even social media. This was vividly explained by one respondent in the following words:

So, the proposals have to be published, public hearings have to go on, and when decisions are made, the commission consults specific stakeholders, including the government. In this regard, the commission has done well in publishing the decisions, especially in recent times. They have even used modern technology, including social media and media engagement, to educate people on the factors they considered in arriving at those tariff decisions. These are measures to enhance transparency. If you visit the PURC website and

social media handles, you will see that most activities are posted there. Most of these changes are recent (Consumer, 2).

One district manager of ECG also supported this view in the following words:

Another transparency mechanism I see with PURC is that they can publish their final decisions on tariffs and vividly explain the assumptions and justification for their final decisions. That is commendable (ECG, 9).

This statement underscores PURC's transparency mechanisms, including using both formal and informal platforms such as social media channels. PURC uses this transparency mechanism to ensure that all stakeholders understand their tariff-setting processes and decisions in the context of tariff setting. For example, once it receives proposals for tariff adjustments from the utilities, PURC publishes them on their website and other media platforms for consumers and stakeholders to share their opinions. They then do public engagements to get consumers' views, including public forums. This was seen in one PURC director's words: "Once PURC receives proposals for tariff adjustments from the utilities, it publishes them on their websites and other news media platforms." Even more commendable is that PURC has published well to explain the factors it considered and the justifications for its decisions.

5.1.2.5 Transparency through public education and training.

Another transparency mechanism used by PURC is education and training. PURC has demonstrated significant commitment towards getting its stakeholders to understand its regulatory activities and actions, particularly in tariff setting methodology and the complaint redress mechanism. As a result, the utilities are now emboldened to point out and challenge PURC in areas they find unclear or unfavourable to them. One official of GWCL said:

PURC has started a severe engagement to get us to understand the processes and factors that inform the commission's tariff decisions.

So, we have the right to challenge the commission in areas we find unclear or unfair. Moreover, we are now so well equipped that, unlike in the past, where we usually accepted the tariffs, probably because of limited understanding, today, we can present reasons why some of the decisions of PURC would not favour us considering our operational costs (GWCL, 6).

One district manager of ECG also testified to this in the following words:

It was about two years ago, or early last year, when they invited all the general managers in Accra to attend a training course at the PURC office in the Ridge area, and we discussed LI2413 extensively. They told us what they expected of us. Afterwards, they also invited the district managers and other vital officers to be trained on customer service and consumer concerns. We were told that the utilities can also report the consumer to PURC (ECG, 3).

This view was supported by another consumer, who also said:

You see, PURC does something that convinces me that they are committed to transparency. Regulation is a technical area, and you can only participate and follow it well if you understand the technical issues. PURC organises educational and training programmes so that we can understand them and do the right thing. For example, before implementing LI 2413, they organised training sessions in which the utilities and customers participated. That, for me, is a good thing (Consumer, 9).

This narration reinforces PURC's commitment to ensuring transparency. PURC provides utilities and consumers with the requisite knowledge in tariff setting processes to appeal better when unsatisfied with any of PURC's tariff decisions.

5.1.2.6 Transparency through International Observers and the Media

The analysis reveals that another transparency mechanism PURC has put in place is that it submits itself to being observed by the international community. For example, the World Bank, the IMF and the African Development Bank (AfDB) conduct reviews of the activities of PURC to analyse its effectiveness and challenges. Additionally, PURC submitted itself to be assessed by the Peer Review and Learning Network (PRLN); PRLN is an intercontinental platform designed to facilitate experiential learning and sharing between the CEOs of electricity regulatory institutions in Kenya, Namibia, Uganda, South Africa, and Ghana. The objectives of the PRLN, among others, are to enhance leadership and management capability among African electricity regulators, leading to increased credibility, transparency, and robustness of regulatory decisions. This is an essential mechanism of transparency. For example, an expert vividly explained as follows:

The international community is always welcome to observe PURC. For example, international organisations such as AfDB, the World Bank and the IMF have conducted several studies on PURC. The IMF and the World Bank recognise PURC as one of Ghana's most credible public sector institutions. I am therefore not surprised that the effective functioning of PURC was considered one of the top priorities of the IMF, which the Government of Ghana was asked to meet to access the second tranche of the IMF grants to Ghana and development support from the World Bank. So, as it stands now, the Government of Ghana is doing everything possible to solve the

challenges faced by PURC, especially the issue of funding through the cash waterfall (Expert, 2).

This assertion emphasises the international community's particular interest in the affairs of PURC.

5.1.2.7 Transparency through Technology

According to the analysis, PURC has also adopted technological devices to enhance transparency. These include tariff reckoners, which allow consumers to check how much power they buy and consume. There is also a consumption calculator, which allows consumers to calculate how much power they consume. This was seen in the words of two consumers and a PURC board member, who thus said:

However, PURC recently developed software enabling stakeholders to access relevant information easily. For example, the tariff reckoner and consumption estimators are great innovations. This is good for transparency because the consumer can calculate his consumption in the comfort of his home and cross-check his balance easily (Consumer, 2).

These revelations suggest that PURC has established enough formal mechanisms to enhance transparency.

5.1.2.8 Visibility and Transparency

Another way transparency was measured in the current study was to investigate the level of visibility of PURC from the perspective of its stakeholders. The findings show that PURC needs to be more visible. For example, one respondent said, “On a scale of 1-10, I will give PURC 4. Not in terms of offices, because the organisation needs to work efficiently. However, PURC must be visible in the media, especially local radio stations” (Government official, 1).

The response of the government official indicates that PURC needs to be more visible. The in-depth analysis revealed specific variabilities.

First, the low visibility of PURC is due to the need for more public awareness of its roles and functions. Respondents think PURC needs to be more proactive in ensuring that, the utilities are equally proactive in preventing issues from occurring, as in the past they have focused their energy on responding to and addressing matters that occasionally arise in their regulatory space. This was seen in the words of one respondent from the civil society organisations, who said:

Visibility in terms of public awareness of its roles can be improved. Its current strategy is more reactive than proactive. PURC waits for controversy before intervening with public education on its mandate (CSO, 2).

This statement means that PURC needs to do more public education but waits until something happens within the sector before it reacts to it. This view was shared by another respondent from the Consumer Protection Agency (CPA), who said: “The reason why anybody may argue that PURC is not transparent enough is that they do not feel PURC until there is an upward tariff adjustment” (CSO, 1).

Second, the data shows that PURC is more visible among people who work in the formal sectors than those who work in the informal sectors. One respondent said this in the following words:

When people are sick, they know that they have to go to the hospital; when people get inadequate services from the utility companies, and the utility companies are not responding, naturally, they should know

where to go, but most people, I mean, those in the informal working class, as well as those in the suburban areas, do not know PURC and what PURC can do for them. They think they have to deal with the same player, which caused the mess (Expert, 2).

The respondent's statement underscores the low level of visibility of PURC in rural areas and among ordinary Ghanaians who are not exposed to matters in the formal sectors. The researcher observed that in Kumasi, the majority of the consumers who had made complaints to PURC were located in a particular suburb in Kumasi where the Kumasi PURC complaints officer lived. Most of these complainants had gotten to know about PURC through recommendations by their neighbours who had benefited from the interventions of PURC. However, it was observed that PURC was very visible in Tamale township and its surrounding towns due to the aggressive engagement activities carried out by the PURC office in Tamale.

PURC has implemented several mechanisms to enhance its transparency, except that public awareness of its roles and functions could be much higher. This is particularly low in the rural areas and among people in the informal sectors.

The findings also identified some limiting factors to PURC's regulatory transparency.

These limiting factors are presented below:

5.1.2.9 Insufficient transparency in the tariff calculation model

While PURC does well to publish its tariff formula and some of the factors it considers when calculating tariffs, there are some key variables that PURC should disclose to the public. As a result, it is impossible to predict or calculate the following tariff PURC would give. For example, one respondent said this in the following words:

Their usual circulars and tariff publications would give you some variables that go into the model, including the exchange rate, the gas price, and the capacity charge. However, they do not put out some numbers, so you do not know how they arrive at their tariff decisions (Expert, 1).

In support of this view, another respondent explained that unlike the National Petroleum Authority (NPA) formula, which one can follow to predict the subsequent fuel adjustment by putting the available variables into the model, it is excruciatingly difficult to follow the PURC model to arrive at the tariff. He said, “PURC tries to hold town hall meetings before the tariff announcement, but I do not know what model they use to calculate their tariff. At least give us a template, show how the calculation predicts the following tariff” (Expert, 2).

More succinctly, another energy policy expert who had worked previously as a top official at Volta River Authority (VRA) said this:

We are not there yet. I do my calculations and bring it to PURC, and PURC takes it and says it will verify to see whether my calculation is okay. Then PURC said after their analysis that they would rather have three than the six we got. Then I asked them to show me how they did so that at least I would be convinced that the answer was 3, and PURC would tell me that some information is private. I expect PURC to show me all their assumptions and methodology, but it does not happen like that. Gradually, they are trying to fix that but have yet to get there (Expert, 3).

These statements indicate that PURC keeps some of its tariff decision variables private. They also show that while PURC is trying to fix this challenge, there appears to be more room for improvement.

However, these disclosures still need to be done because some variables are unpredictable. Thus, PURC considers many economic, social, political, and technological factors during regulation. All these factors affect the tariff outcome. Beyond the technical and economic, there are social and political factors such as equity and justice, affordability, security, and the political environment. These variables cannot be easily predicted, quantified, and put into the tariff formula the way NPA can do theirs. For example, one director of PURC said:

The formula for tariff calculation is on the PURC website, but there needs to be a decision variable that cannot be predicted or easily computed. The regulator has this discretionary power, which is essential for every public service (PURC Director, 2).

In support of this view, another board member admitted that when it comes to transparency in tariffs, PURC faces challenges because it is difficult to predict some of the variables used to calculate tariffs. In his words, he said:

Where we need to improve, though not unique to PURC but to regulatory bodies worldwide, is our inability to predict the tariffs in the electricity sector. This is because, apart from the economic factors, there is also a variable that is always discretionary. After all, it cannot be quantified. We sometimes consider many social, economic, political and technical factors (PURC Board member, 1).

In conclusion, some decision variables are missing from the PURC tariff setting model, because some of the variables PURC put into its tariff calculation model are not easy to predict.

5.1.2.10 Perceived Symbolic Participation

According to the analysis, some stakeholders of PURC perceive PURC's stakeholder engagement during tariff setting as only a formality. Many times, PURC, after arriving at its interim decision, needs to go back to stakeholders to tell them how they arrived at that decision. One energy expert in the civil society organisations thus said: "In some countries, including Uganda, some of the board decisions are published, but PURC does not publish the interim decision but the final one." (CSO, 5). This view was shared by another energy expert, who thus said, "Whenever they announce tariffs, they consult an oracle. That is lacking in terms of transparency" (Expert, 2). One consumer also supported this view in the following words:

That is people's perception out there. People perceive that PURC comes to public engagements with their pre-determined figures, so the forums are only talk shows or formalities. It may not be so, but PURC has not done much to clear that misconception. When PURC receives suggestions from stakeholders, the final adjustments they make come to us as a surprise because you will realise that the figure they announce differs from what you requested. I agree that they usually find a balance between the interest of the consumer and the utility, but they should let us know what they finally decide on so that we do not feel like our views do not matter (Consumer, 9).

These responses demonstrate that though PURC consults stakeholders before the tariffs are set, the stakeholders need to know whether their views count in the final tariff decision of PURC.

5.1.2.11 Board members' allegiance and transparency concerns

The analysis also shows that swearing an oath of secrecy is a limiting factor in PURC's transparency. Though it helps to enhance PURC's resistance to political influence, it tends to

be a limiting factor in PURC's transparency with the stakeholders. Mainly, it defeats the purpose of institutional representation. One institutional representative on the PURC board said this in the following words, “I have always questioned why I am supposed to represent my institution, yet I am asked to swear an oath of secrecy during board meetings. There are things I cannot tell you about the institution I represent” (PURC Board member, 2).

This concern was also raised by the president of one of the civil societies organisations represented on the board. He hinted that he has mostly had issues with all the representatives they had sent to the PURC board because they mostly need to report back to them on matters PURC discusses that affect them directly. In his words, he said:

Unfortunately, I have always had issues with our representatives on the PURC board because immediately they get to the board, their actions leave us in doubt as to whether they are there to advocate for our rights or perhaps the PURC environment makes them succumb to some pressures (CSO, 2).

This statement underscores the issue of institutional representatives' allegiance to the PURC board. He further complained, “Usually, they only brief us about PURC decisions on matters that affect us directly once we hear the news. So, we can often only respond to matters during their budding stage once they have reached the final stage” (CSO, 2).

This response shows that when institutions send their representatives to the PURC board, they feel they need to be represented more in the decisions of the PURC because their representatives swear an oath of secrecy.

This study has found that PURC has put enough mechanisms in place to enhance its transparency, particularly in publishing its major decisions, participation, education and

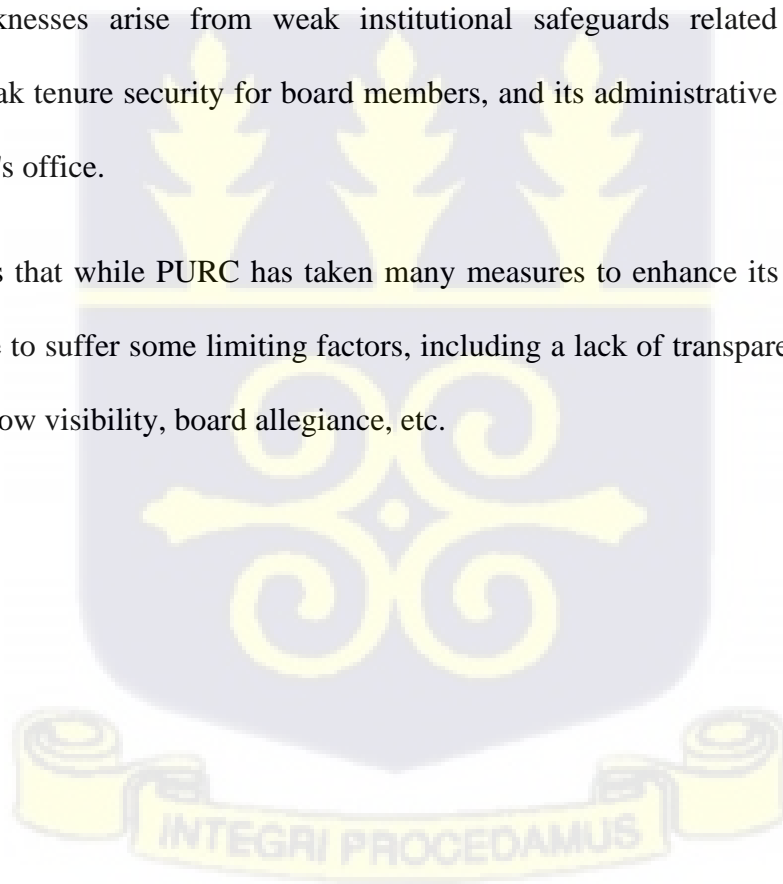
training, etc. However, PURC needs to improve its transparency and visibility in its tariff-setting methodology.

5.2 Conclusion

This chapter presented the findings of the first objective, which sought to assess the extent to which PURC's legal and institutional design align with critical attributes of effective regulatory governance. The key indicators used include autonomy and transparency.

Regarding autonomy, the study results show that PURC has a commendable level of managerial, legal and financial autonomy but needs more robust structural autonomy. This weakness serves as the main opening point for political influence or interference. These structural weaknesses arise from weak institutional safeguards related to appointment procedures, weak tenure security for board members, and its administrative reporting system to the president's office.

The data shows that while PURC has taken many measures to enhance its transparency, its efforts continue to suffer some limiting factors, including a lack of transparency in the tariff-setting model, low visibility, board allegiance, etc.



CHAPTER SIX

PURC'S REGULATORY RESPONSIVENESS IN THE ELECTRICITY AND URBAN WATER SECTORS

6.1 Introduction

This chapter presents the findings of the study's second objective, a comprehensive assessment of PURC's regulatory responsiveness for stakeholders in the electricity and urban water sectors. The results, notably, are classified under three key themes: flexibility, stakeholder engagement, and timeliness. These themes are not just arbitrary categories but have profound implications for the sectors, shaping how regulatory responsiveness is understood and practised.

6.2 Flexibility pathways

According to respondents, PURC has put a lot of flexible mechanisms in place to make it adaptive and responsive to changing circumstances. For example, the board sets broad guidelines that give officials enough flexibility in choosing which details to follow in response to circumstances at the time. For example, when deciding on revenue requirements submitted by the utilities, the board has the prerogative of deciding on what cost elements to pass on with particular attention to the circumstances. The commission applies the “*used and useful*” concept in regulation. This concept means that PURC does not just accept and pass on every cost presented by utility service providers but instead considers and passes on only those costs it considers proper. For example, one board member said:

PURC has demonstrated remarkable adaptability. I have witnessed numerous mechanisms that attest to this. For instance, the board can set broad guidelines and the authority to determine the revenue requirement based on economic indicators. This adaptability is

further evident in our ability to modify our rate-setting guidelines to align with changing circumstances (PURC Board Member, 1).

This view resonates with the views shared by another respondent from NEDCO who said, “If anyone who vacated from PURC earlier wants to return, he will find it difficult to operate unless he undergoes thorough in-service training” (NEDCO, 2).

The responses received underscore the innovative spirit of PURC, particularly their relentless pursuit of new solutions. They have introduced mobile applications like the tariff reckoner and power consumption estimator, empowering consumers to calculate and monitor their power usage. Additionally, PURC has transitioned from a paper-based reporting system to a more efficient database management system, facilitating seamless reporting and information sharing within PURC's offices. Furthermore, PURC is developing a second database management system, DBMS II, to enable them to share information with stakeholders on a common platform. An expert also echoed this commitment to innovation:

PURC is very dynamic; in those days, they used to write almost everything in ink. Still, today, they have resorted to various technological means, including DBMS, whereby as you sit behind your computer, your senior manager, supervisor, or director can access the same data or platform. I think that is a perfect thing to do
(Expert, 3).

Another respondent from the Energy Commission (EC) confirmed that PURC has partnered with the EC to devise innovative solutions, including introducing smart prepaid meters for utilities and renewable energy transition initiatives.

Through a collaborative effort, the Energy Commission and PURC have been able to roll out intelligent prepaid meters, which are being used by the distribution utilities. There are also innovations in renewable energy technologies (net metering technology) through collaborative efforts between the two (Energy Commission).

The flexibility of PURC's regulatory processes was further emphasised by another consumer who thus said:

PURC has a formal process for reviewing regulations regularly. PURC reviews and updates its regulations frequently to adapt to changing situations. The commission has demonstrated enough research and technology capacity to respond to changing situations. E.g. tariff reckoner and consumption estimator. Beyond this, the PURC has a flexible complaints settlement procedure that resolves consumer complaints about water and electricity that are beyond our expectations. The process is fair, transparent, and flexible to consumers and utility service providers (Consumer, 14).

Indeed, the researcher observed during the data collection in the middle and northern belts that some PURC and Energy Commission officials had visited some communities in the Northern and Savanna regions connected with smart prepaid meters and solar energy projects. These initiatives underscore the extent to which PURC pushes to ensure that it evolves daily while staying abreast of modern issues in its regulated sector.

The current study found that PURC is flexible but must improve in research and technology, allowing alternative compliance pathways to enable the regulators to be innovative. Additionally, PURC should increase its compliance incentive approaches, such as granting utility exemptions or waivers in some instances. Not only these, but PURC should also leverage pilot programmes to overcome the risk of change.

However, the analyses found some limiting factors to PURC's flexibility, including donor influence and legal restrictions. First, PURC still has its aprons tied to international donors who usually require them to follow specific prescribed paths, thereby stifling PURC's initiatives in other areas. For example, a board member said, "PURC relies heavily on donor funds, and the donor has areas they propose to you which you may not want" (PURC Board member, 2). Secondly, PURC is a creation of law, and it is expected to act within certain legal frameworks and procedures, which sometimes stifles its initiatives in some other areas.

6.3 Stakeholder Engagement

Another indicator used to measure the responsiveness of PURC was stakeholder engagement. Two key sub-themes emerged from the in-depth analysis, which included participation and communication options. These sub-themes are presented below.

6.3.1 Public Participation

The analysis shows that PURC has put a significant number of mechanisms in place to enhance the participation of stakeholders in its regulatory decisions. These mechanisms include institutional representation, which brings diverse and well-rounded skills and perspectives to the board. For example, labour, industry, government and consumers are on the PURC board. Second, stakeholder consultations involve contacting key stakeholders such as utility service providers, the Association of Ghana Industries (AGI), labour, government, consumers, and the general public to consider tariff decisions. Third, consumer service clinics bring utility service providers and consumers together to receive training and education on new developments in the industry. One regional manager of GWCL said this in the following words:

Now, I am seeing something positive; at least for the first time, I have seen PURC going out to meet its stakeholders. Initially, you only saw them going out when it had more to do with tariffs, but it is not about

tariff increases. They were here recently. That was last month, and we had a fruitful discussion, and going forward, that is the way they should go (GWCL, 4).

This response shows that PURC has recently adopted more aggressive pathways to public engagements. For example, they immediately get tariff adjustments before they do public engagements. One consumer confirmed this in the following words:

The commission also has regular public hearings, forums, and stakeholder meetings. It has been there for long, but in recent times, I have seen much more improvement. I had a chance to attend one of them at the Prempeh assembly hall at Kumasi, and the level of commitment enthused the PURC staff to reach out to its stakeholders (Consumer, 11).

These responses show that PURC has demonstrated enough commitment towards stakeholder engagements. These activities include public hearings, consumer clinics, and public education.

Even with these mechanisms, the analysis revealed a few shortfalls. The first is that PURC does more public consultations during the central tariff but does little during the quarterly adjustment. This was seen in the words of one institutional representative on the board, who said:

My problem is that PURC conducts more intensive and broader stakeholder consultations during the central tariff setting but needs to do the same regarding quarterly adjustments. Meanwhile, sometimes, the rate of adjustments in the minor tariffs surpasses what happens in some of the major tariffs. We must consult all stakeholders at every

point, whether major or minor adjustments (PURC, board member, 2).

Secondly, PURC tries to invite diverse stakeholders to its town hall meetings. However, the stakeholders usually need to be more diverse and comprehensive enough, and many times, discussions could be more balanced with consumers' concerns, thereby burying other equally essential discussions. For example, one consumer said: "The size of the room in which these meetings are held readily tells you that PURC does not expect to receive many people" (Consumer, 2). This view also reflected the view of a former board member of PURC, who said: "Stakeholder engagements are held frequently in the regional capitals to invited audiences, but these audiences do not represent the grassroots, and the poor are usually marginalised" (Former Board member, 2).

6.3.2 Communication

Effective stakeholder engagement also involves effective communication, which includes providing stakeholders with enough options to communicate with the regulator. The current study found that PURC has provided various communication options to enable communication between them and stakeholders. These include print media options such as letter writing, press releases, newspapers, and souvenirs, as well as electronic technologies, which include formal options such as television, radio, e-mails, and phone calls, as well as social media platforms such as Instagram, Facebook, Twitter, and WhatsApp messenger. In addition, PURC does a lot of radio and television communications. In the words of one consumer, he said:

However, apart from knowing Mr. Asare, whom I can always contact, I also know the PURC office at Cocoa board. I can also get their contact number from their website. I hear about PURC mainly on the radio...Facebook; sometimes, I see news items about them on

television. During the radio programmes, they put out their telephone numbers, telling us we can call or send them messages on WhatsApp (Consumer, 5).

Another respondent added:

I know PURC has a website, but unfortunately, most people do not visit; all regions have telephone lines, e-mail contacts, and offices. All these channels are available, but many people need to use them (Government official, 4).

These narrations highlight some of the various communication options available to stakeholders. The variety of communication options further emphasises PURC's commitment to reaching broad and diverse stakeholders.

6.4 Timeliness

The last theme under the regulatory responsiveness of the PURC focused on timeliness in responding to petitions and complaints. Three sub-themes emerged from the analysis: quick response to complaints, proactive response to complaints, and missing regulatory deadlines. They are presented below.

6.4.1 Quick response to complaints.

It was realised that respondents, including utility service providers and consumers who knew about PURC's complaint redress mechanism, praised PURC for its quick response to complaints. In addition, consumers said they preferred channelling their complaints through PURC to reporting directly to the utilities' customer service unit. For example, one consumer narrated a personal explanation as follows;

Some time ago in Kwadaso Dwinase, I saw a broken pipe on the highways, and I was surprised to see volumes of water going to

waste, and many people watched it with less concern. Immediately, I called PURC, and in less than 30 minutes, I saw that GWCL was working on it (Consumer, 2).

During the focus group discussion in Kumasi, consumers present who had had their complaints resolved by PURC in the past revealed that the PURC complaint officers responded more swiftly to their concerns than both ECG and GWCL. For example, a participant said, “PURC responds more swiftly to complaints than ECG and GWCL” (FGD, 2).

Additionally, the researcher observed that the complaints officers at the regional levels usually maintain close relationships with many of their consumers and utility officials, particularly the regional and district managers, to facilitate close and easy working relationships. For example, in Kumasi and Tamale, it was observed that many people in some communities knew the complaint officers by their names and had exchanged phone numbers to facilitate accessible communication.

6.4.2 Proactive response to complaints.

The results show that PURC needs to be more proactive to ensure that utility service providers adhere to their obligations of providing quality, safe and reliable service to consumers. For example, one consumer said:

I like PURC because they act swiftly and will end up chasing you, the complainant until the problem is solved. However, why can't they do the same thing to the utility for them to solve the poor services so that we would not even have to complain in the first place? I am saying this because not everybody will like to come and complain even if they know about PURC (Consumer, 5).

This was supported by an expert who thus said:

PURC approves tariffs for a certain level of reliable, safe and quality utility service. Unfortunately, the utilities are expected to meet certain KPIs after receiving certain tariff adjustments. Why should consumers continue to suffer poor services and complain to PURC before something is done about it? PURC would ensure that the utilities improve upon adhering to the promises they made during tariff reviews so that consumers would not have to go to PURC to complain (Expert, 2).

These responses show that PURC needs to be more proactive in addressing consumers' challenges. They expect that PURC will resolve their challenges without waiting for them to complain.

6.5 Missing of regulatory deadlines.

The analysis revealed two areas in which PURC misses deadlines. The first area has to do with PURC's missing complaint settlement deadlines. A respondent from the consumer protection agency shared that he usually receives complaints from some consumers that PURC delayed in resolving their issues. In his words, he said:

Some of my people have complained to me before about their experiences. It usually takes too long to receive a response to the complaints launched with PURC. Often, PURC will acknowledge receipt, yet you need to follow up before they tell you they are working on it (CSO, 1).

This statement suggests that sometimes, PURC delays in addressing a complaint. However, further checks show that such delays do not come from PURC. In all the three focus group

discussions held, one for each belt, it was concluded that PURC responds promptly to complaints it receives from complainants, whether from a consumer or utility service provider and that any delayed resolution of the matter usually comes from the side of the utility service providers. Thus, once PURC receives a complaint, it immediately writes to the utility service provider or the consumer to whom a complaint has been made and responds within five days. PURC continues to follow up with official e-mails or phone calls and sometimes WhatsApp messages until the 16th to 17th day when it calls for settlement when the utility fails to resolve the matter or respond to the complainant's satisfaction. However, the utility service provider often needs to respond to the complaints. For example, in the FGD held in Accra, a district manager of ECG confirmed this in the following words, “PURC does not delay in handling complaints. I must honestly admit that the delays come from us. You know, sometimes it could be more deliberate. Some matters, especially billing issues, take time to ascertain the facts” (ECG, 1). This response aligns with the response of another regional manager of GWCL, who thus said:

PURC writes to us and gives us deadlines for their response. If you do not respond, they will follow up with other communications. PURC responds to issues promptly. It is the utilities that usually delay resolutions to complaints. There are several significant reasons for our delay. Some of the complaints can be resolved without delay, and others, too, depending on the nature of the complaints (GWCL, 2).

These responses demonstrate that PURC responds to issues promptly and consistently follows up until the matter is resolved. Any instance in which a delay occurs is due to delays from the utility service providers.

The second area in which regulatory deadlines are usually missed concerns tariff review schedules at the national level. According to respondents, PURC needs to consistently meet its Quarterly Tariff Review (QTR) schedule, particularly from 2015, 2016, 2017, 2021, and 2022.

However, a response from PURC Board Member 1 explained that, between 2015, 2016, and 2017, there were quality of service issues, load shedding, and volatile oil prices that could not have permitted the strict implementation of the quarterly tariff review, because of the effect on the country's national security, economic, social protection. So, the PURC used the discretionary variables to manage and stabilise the situation. In 2021 and 2022, there was a transitional gap; after the 2020 elections, it took the government time to reconstitute the commission's board. The board takes the commission's decision, and the secretariat implements policy and operational activities.

Overall, this study has found that PURC has provided regulatory responsiveness for stakeholders. First, PURC has adopted robust stakeholder engagement strategies, including participatory approaches and providing many communication options to enhance stakeholder communication. Finally, PURC responded promptly to some stakeholders' complaints or concerns. However, PURC needs to improve significantly in some areas, such as taking proactive measures to address stakeholders' concerns and getting utility service providers to comply with deadlines during complaint settlements.



CHAPTER SEVEN

PURC'S REGULATORY CREDIBILITY IN THE ELECTRICITY AND URBAN WATER SECTORS

7.1 Introduction

As a response to the global proliferation of regulatory reforms, credibility has emerged as a pivotal factor in delegating regulatory power to independent regulatory agencies. Consequently, regulatory credibility has become a key yardstick for evaluating the quality of regulatory governance of IRAs. However, the existing literature has not sufficiently addressed this criterion, thereby limiting our comprehension of the effectiveness of IRAs in fulfilling their regulatory mandate. Hence, the third objective of this study was to meticulously assess the extent to which PURC has delivered regulatory credibility for stakeholders in the electricity and urban water sectors. To achieve this objective, we employed a comprehensive approach, measuring credibility using four key indicators proposed by Maggetti (2010): autonomy from elected politicians, predictable time – consistencies in policies and decisions, autonomy from regulatees, and trust from stakeholders.

This chapter presents the findings using these indicators as the main themes, supported by sub-themes that emerged in the data analysis. The first section presents results on PURC's autonomy from elected politicians, the next section presents PURC's predictable-time consistencies in policies and actions, the subsequent one presents PURC's autonomy from regulators, and the final one presents results of stakeholder trust.

7.2 PURC's autonomy from elected politicians

The analysis revealed a significant issue of political interference in the operations of PURC, particularly in the context of tariff-setting decisions. This finding underscores the importance of our research, as it highlights a key challenge that PURC faces in maintaining its regulatory

credibility. For instance, an energy expert who previously held a top management position in one of the organisations regulated by PURC, expressed his concerns about the agency's effectiveness, attributing it to political interference in its decisions. His statement is a poignant reflection of the situation:

Sometimes, we submit proposals requesting a specific percentage increase based on the prevailing economic factors. PURC takes our proposal and analyses it to see whether our request is justifiable; they consider the economic factors as well as the interests of the consumers. When they make a decision, they seek approval from the president before they announce it. Then, the Government will examine how this will affect its political fortunes (Expert, 3).

This view was supported by a consumer in the following words:

The Government is not demonstrating enough commitment to make PURC an independent regulatory body because its decisions and policies are somehow tied to its political fortunes as a government. The Government must put its hands off PURC's regulatory decisions. The Government must make the general economic environment stable for the commission to make decisions (Consumer, 9).

One Member of Parliament further supported these views in the following words:

The issue of tariffs is of political interest to the Government and is even more worrying. It puts more pressure because it directly impacts our political fortunes. When prices are high and people are complaining, it eventually comes to the doorstep of the ruling party, which is a major issue (Government official, 6).

These narrations emphasise that there is political inference in the work of PURC, mainly due to political fortunes.

The analysis also shows that despite political interference, the leadership of PURC demonstrated a solid commitment to resisting such influences. For example, during the regime of ex-president John Agyekum Kuffour, the president sought to get PURC to refrain from announcing an upward tariff decision they had arrived at, but PURC boldly declined. When the government insisted on the reduction, the then board chairman of PURC, Mr Andrews Kwame Pianim, resigned.

Similarly, another Member of Parliament, once a former Minister of Energy, added that during his time as energy minister, he once called the executive secretary (ES) of PURC in connection with tariff reviews. However, to his surprise, the ES refused to oblige to his demand. He said, thus, “As a Minister of Energy, I recall calling the then executive secretary of the PURC to inquire about tariffs. To my surprise, they told me that they wanted to be able to continue when it came to tariff setting” (Government official, 1).

These responses demonstrate how PURC has resisted political interference in its work. For example, the resignation of the board chairman in response to government pressure and the refusal of the executive secretary to comply with a minister’s demands underscore PURC’s dedication to maintaining regulatory credibility.

7.3 PURC’s Predictable Time - Consistency in Decisions and Policies

This indicator was used to analyse PURC’s consistency in delivering regulatory decisions and policies. In the current study, an analysis of the nuanced details shows that, in general, stakeholders find PURC consistent or predictable due to the uniformity of their working culture and practices, which is evident in how PURC handles affairs such as stakeholder engagements, commitment to work, code of conduct, administrative procedures, and complaint redress

processes. Thus, the experience one gets in one office of PURC is highly likely to be the same in other regional offices. Respondents attribute this uniformity to PURC officials guided by Standard Operating Procedures, which guide business conduct. This reflects the view shared by one GWCL customer. In his words, he thus said:

One thing I admire about PURC is its standard operating procedures, which all offices uniformly apply. You will see predictability and consistency in almost every office of PURC. I am reliably informed that if the World Bank and Government need credible information, they fall on PURC. They are different from how typical public organisations do their things (Consumer, 14).

This view was supported by one regional manager of ECG, who said:

Yes, PURC has been remarkably consistent. That is one thing I respect them for. They always provide clear roadmaps and timelines, and they follow them. The most important thing is making the consumers understand tariff adjustment. I have not seen any significant changes in PURC due to changes in government. PURC has technical staff, and a change of government may impact the regulatory policy direction but will not affect PURC's direction (ECG, 2).

These two assertions above are just two of the testimonies shared by respondents to emphasise how predictable PURC has been due to their working culture and Standard Operating Procedures.

This notwithstanding, the analysis shows that PURC needs to demonstrate predictability or consistency in its tariff-setting actions. This is particularly true about its quarterly adjustments schedule. For example, PURC needs to be consistent with its quarterly adjustment plan for 2014, 2015, 2016, 2021, and 2022. For example, one regional manager at GWCL thus said:

That is an area I will have an issue with. The LI says that PURC will make significant tariffs every two years and make quarterly adjustments in line with economic indicators at the time. Unfortunately, despite these arrangements, PURC made no significant adjustments for nearly four years. Only this year have we seen the quarterly adjustments (GWCL, 2).

Another respondent has an issue with the time consistency and unpredictability of PURC decisions and policies:

That is where I need help. When you look at PURC, especially regarding exchange rate volatility, they are reluctant to allow that to be reflected in the tariff model. That is also true about exchange rates. That is a significant issue for me; eventually, it will bite us. This has shown some level of inconsistency regarding the PURC, and the PURC should focus on that because you cannot have a free lunch (Government official, 2).

These responses emphasise the unpredictability of PURC's tariff decisions, particularly regarding quarterly tariff adjustments. Contrary to the scheduled timeframe for quarterly adjustments, there were some instances in which PURC did not follow its timelines.

Officials of PURC blamed this issue on the political, social and economic context in which PURC operates. For example, one PURC director thus said:

PURC has been consistent. The seemingly insufficient predictability of the PURC tariff is due to the government's inability to keep the microeconomic indicators stable. The changes in these factors, including the country's general economic hardship, affect PURC's ability to predict some of the variables used for determining the tariff
(PURC Director, 2).

This assertion by the director shows that the unpredictable political, social, and economic conditions coupled with the country's general economic hardships make tariff adjustments difficult.

In summary, the analysis shows that PURC has demonstrated enough regulatory predictability in its administrative and operational processes; however, it needs to show consistency in its tariff-setting decisions, especially the quarterly adjustments. This is due to the unpredictability of the country's socio-politico-economic conditions.

7.4 Autonomy from Regulatees and Powerful Businesses/Interest Groups

This dimension sought to see whether PURC has been captured by the industry players, including those they regulate, influential businesses, and interest groups. From the analysis, though stakeholders said they do not have evidence to suggest that PURC has been captured by the regulatees or other business or interest groups, they think PURC needs to be more lenient towards regulated utility providers. A consumer's comment highlights concern about tariff increments without corresponding downward adjustments, implying a possible influence of utilities. She thus said:

Yes, our perception is that PURC could be captured because whenever they propose upward adjustments, PURC does not do enough to stop the continual increment. I remember that in one of those engagements, we, the CPA, brought to the attention of PURC that the consumers cannot be the ones to pay for the utilities' capital investments; thus, if the utility wants to build a building, why should they bill us for it? Even future projects? (Consumer, 10).

This capture perception is further exacerbated by PURC's inability to ensure that the utilities provide quality consumer services. However, some respondents do not see it as a capture per se but rather a power-play. For example, an energy expert further describes a power-play scenario where utilities possess unseen power, making the enforcement of regulatory orders challenging for PURC. In his words, he thus said:

There is no capture. It is a power-play. They disregard the regulator because they have too much-unseen power, making it difficult for the regulator. How often does ECG put power off, and the regulator cannot charge? If you charge them, they know they will return to the Government. Nobody will hold them accountable for their actions. PURC knows what to do, but they cannot enforce it. Sometimes, they do something for the optics (Energy Expert, 1).

This unseen power is explained in the view shared by a member of one Civil Society Organization;

This unseen hand explained why ECG needs to comply with the cash waterfall sharing mechanism, thereby denying all players funds in the sector. That may also be why GWCL added the Teshie Desalination plant for a tariff, and after

getting the tariff, they shut the plant down. These would affect the PURC's performance in regulating the sectors (CSO, 2).

This response shows that PURC has not been captured; the utilities are clothed with so many unseen powers that it is difficult for PURC to bring them to order. It also suggests that such power-play exists because the Executive Secretary of PURC and the Managing Directors of the utilities are appointed by the same appointing authority, making it difficult to give them regulatory orders.

7.5 Trust from Stakeholders

The final indicator used to measure the credibility of PURC in the current study was the level of trust from stakeholders. Three key stakeholders were considered: the government, investors (including utility companies), and consumers. According to the findings, respondents generally express mixed trust for PURC. While a large section of them said they trust PURC because of its positive organisational culture, professionalism, and fairness in their complaint settlement processes, others expressed a lower level of trust due to PURC's inability to balance the interests of consumers and the utilities. With regards to trust for PURC, one assembly member at Tamale said this:

I trust what the institution is doing; they are doing it well for us, and we trust them to resolve our complaints. If the government helps raise them to someplace, you can do more work than you do now (Assemblyman, Tamale).

Another consumer in Adum Kumasi, in confirming his trust in PURC, has this to say in terms of percentage;

I trust PURC; I would give them 7 out of 10 because they are fair and do not stand behind the customer or the utility. They are objective in

pointing out where they feel you erred. Then, they recommend what should be done (Consumer, 1).

This was supported by another consumer who said he would rate his level of trust for PURC at 60%. In his words, he thus said:

At first, I thought they were a unique private organisation that the government had hired to supervise the utilities. When I got into contact, I realised it is a public institution. They are consistent in their operations and very fair in their complaint handling. Regarding trust, I would rate PURC at 60% (Consumer, 2).

However, a large section also said they would rather avoid PURC due to their inability to balance stakeholders' interests about their tariff-setting mandate. For example, consumers think that PURC does not consider their interests in tariff decisions but does the utilities' bidding by giving them tariff increases whenever they request them. On the other hand, some utilities also think that PURC needs to consider their interests because they do not always get the proposed upward adjustment figure they submit to PURC. For example, one member of parliament, who also serves on the committee of mines and energy said:

When you meet the power generators and distributors, they feel PURC is not considering their concerns. If you meet consumers, too, they think PURC does not appreciate the economic condition of the Ghanaian consumer (Government official, 5).

This response means that the utilities expect PURC to appreciate their operational cost and give them a cost-reflective tariff to enable them to cover their cost and make necessary savings to invest in equipment. On the other hand, consumers expect PURC to appreciate their economic

challenges and give them tariffs that will not erode their wages. This is also seen in the response of another member of parliament, who thus said:

For example, if you take service providers, they are running a business, and their interests are not protected when given tariffs lower than their business cost. At the same time, when you meet consumers, they think that when tariff increases are higher than national wage adjustments, their wages are eroded by PURC's activities (Government official, 3).

This view underscores the excruciatingly tricky task of PURC in balancing stakeholders' interests. Thus, each action PURC takes will only be in the complete interest of some parties, including the consumer, the utility service provider, and even the government. Furthermore, this issue of mistrust for PURC is further exasperated by PURC's inability to return to stakeholders after engagements to communicate their interim tariff decisions to them before they announce them to the public.

However, trust for PURC is generally seen in their complaints redress mechanism and strong organisational culture, including professionalism in their work, fairness, and effectiveness in handling complaints. As a result, those who expressed a high level of trust were the consumers and the utilities who have had experiential knowledge of PURC's complaints redress mechanisms and the working culture of PURC staff. For example, one board member said: "Yes, stakeholders show support and trust in PURC. We have received several commendation letters from consumers whom we have been able to assist" (PURC Board Member, 1).

In support of this assertion, a former board member of PURC revealed that most international development partners have come to trust PURC as the most credible public institution in Ghana. According to him, the Government of Ghana would not have been

able to access the IMF bailout if it had not because of the instrumental role PURC played. In his words, he said:

In recent times, even the World Bank and IMF have had to rely on PURC to meet 6 out of 9 conditions for the bailout they gave Ghana. That, to me, is significant. The high trust from international organisations adds to the credibility of the PURC. (Former PURC Board Member, 2).

In addition, during the fieldwork, the researcher observed that consumers who know about PURC's role in protecting the interests of the consumer trust PURC so much that they are more willing to report their frustrations to PURC than to the utility's customer service office. Generally, they find PURC more credible and responsive to their concerns than the utilities.

In Tamale, for example, the utilities, particularly NEDCo, rely heavily on PURC to get consumers to comply with some requirements, including paying bills and accepting prepaid meters. Again, the community trusts PURC so much that when their people are dissatisfied with the utilities' services and threaten to go on demonstrations or protests, they call PURC to intervene. Likewise, the utilities rely on PURC to convince the people to accept some of their requirements. PURC has become the most reliable and credible mediator between the communities and the utility service providers. This was also witnessed in the southern belt, where assembly members relied on PURC to resolve their people's challenges with utility service provision. One assembly member made this comment:

The people do not trust the utilities but have come to trust PURC so much that if the utilities need to fix a problem for them and PURC is not there to witness it, they would never allow the utilities to enter their compound (Assemblyman, Kumasi).

This was confirmed by one regional manager of PURC, who thus said:

This year, we have prevented more than five demonstrations and received petitions from the chiefs when they have meter issues. So, we are now like the mouthpiece of the service providers (PURC Regional Manager, 3).

In all the focus group discussions held in all three belts, consumers and utility service providers concluded that only those who know PURC for tariff issues may trust PURC. However, those who encounter PURC in terms of their professionalism and responsiveness to complaints would come to trust and support PURC. In all of the three regional offices of PURC, the researcher found some letters of appreciation or commendations written to PURC for responding swiftly to their concerns, as attached in (Appendix 3).

In conclusion, the current study has revealed that consumers and utility service providers may express low dissatisfaction with PURC's tariff decisions but trust PURC when they encounter how PURC works professionally and how effectively and fairly it addresses complaints. Surprisingly, despite the political interference in PURC's decisions, the analysis indicates that PURC enjoys a high level of trust and support from its stakeholders, including the government.



CHAPTER EIGHT

DISCUSSION OF FINDINGS

8.1 Introduction

This chapter is a natural follow-up on the result chapters. This study sought to achieve specific objectives and answer critical research questions from the literature review. The results obtained from the fieldwork must be juxtaposed against the findings of other scholars in the extant literature. This is what the chapter focuses on. It starts by presenting the objectives of the study, which focused on analysing the alignment of PURC legal and institutional design with attributes, specifically autonomy and transparency, to assess effective regulatory governance and to conduct an in-depth investigation whether PURC has delivered regulatory responsiveness and credibility for its stakeholders in the electricity and urban water sectors of Ghana.

It places the study results in the context of academic discourses that predate this study. This is more relevant because Samoff (2001) has pointed out that “simplifying findings or “lessons learned” to generalise may lead to stating the obvious rather than developing useful guides to action” (Samoff, 2001: 16). This is the call to which this chapter is responding.

8.2 Theoretical appeal

The study's primary theoretical lenses were the public interest theory, the theory of regulatory capture and the support of credible commitment theory. The overarching objective of the study was to conduct a comprehensive qualitative investigation into the regulatory governance of the Public Utilities Regulatory Commission (PURC) in Ghana, assessing the alignment of its legal and institutional design, specifically autonomy and transparency for effective regulatory governance, assessing its responsiveness to stakeholders in the electricity and urban water sectors, and examining the perceived level of regulatory credibility provided to stakeholders.

Within the context of regulatory administration, the motive behind the actions of public servants, be they elected politicians, bureaucrats or regulatory officials, have been studied widely to ascertain whether the motives behind regulatory actions or policies are grounded solely in pro-social motivations to seek the social welfare of the public or to pursue their private interests. For public interest theorists, the justification for regulation is the public interest. On the other hand, capture theorists see regulation as a tool for industry players, particularly the regulators, elected politicians, powerful businesses and regulatory officials, to influence the regulatory process for their private interests. Extant empirical studies have reported that regulatory actions are usually grounded in public interest orientations rather than clientelist motives.

For example, using empirical methods, Mizutani and Nakamura (2019) investigated the extent to which the public interest and the private interest theories, respectively, explain the actual regulatory process in the Japanese context, and their estimation findings showed that motives grounded in the public interest were higher than those rooted in private interest. Specifically, findings also showed that regulations on the non-public utility industry are mainly constructed with social welfare in mind. However, those in the public utility industry tend to be mainly captured by private groups, as assumed in private interest theory. Surprisingly, despite the theory of regulatory capture's leaning towards deregulation, there is new evidence to show that some deregulation actions were rooted in the public interest. For example, Long, Li, and Wan (2019) also investigated the motivation for deregulation in Chinese airlines and found support for the motives of public interest.

On the other hand, regulatory capture theory provided the lens to empirically examine the 2014 Mount Polley mining disaster in British Columbia, Canada (Edwards, 2021). In that study, regulatory capture was associated with deficiencies in inspection, compliance, and enforcement

standards, leading to Canada's most significant environmental catastrophe. Similarly, Prihandono (2023) examined the Indonesian energy sector using the public interest and capture regulation theory. They reported evidence of political influence suggesting the existence of regulatory capture. According to the study, regulatory capture could undermine the public interest actions of the regulatory agency.

Potter's (2013) investigation into the relationship between agencies' public interest orientation and their effectiveness in regulating three IRAs in the U.S. context yielded significant findings. The study discovered that agencies that adopted a balanced approach, blending public interest and technical orientations, were more successful in safeguarding regulatees from collapse. Moreover, the study unearthed evidence of a direct link between an agency's public interest orientation and its capacity to oversee a regulated community effectively.

The credible commitment theoretical perspective plays a crucial role in understanding why regulatory functions are often delegated to independent regulatory agencies, rather than organisations within the bureaucratic hierarchy of the state. This theory posits that regulatory credibility is the driving force behind such actions. In their quest for predictable time-consistency, elected politicians seek to reassure investors and the general public. They do so by refraining from interfering in the regulatory process for electoral gains. They establish regulatory institutions independent of the political class, serving as a testament to their commitment. However, despite politicians' promises of credible commitment, studies have uncovered political interference in the regulatory process (Reel, 2014).

In the current study, regulatory governance in the electricity and urban waters sectors has been mainly influenced by several factors, some of which are related to internal forces within PURC, including the institutional design of PURC. In contrast, other factors are external forces that affect the regulatory actions of PURC. For instance, the government has demonstrated

significant steps to legalise PURC while designing its institutions to shield it from external influence. This is a demonstration of credible commitment. Unfortunately, political interference and manipulation of the regulatory levy demonstrate that some strange forces may be poised to capture PURC to pursue private interests against the public interest.

8.3 Quality of PURC's Institutional Design and Legal Framework

Research suggests that beginning in the 1980s, it has become a common trend among governments across the globe to establish independent regulatory agencies as part of their regulatory reforms (Majone, 1997). However, it has been recognised that these IRAs need help to achieve their goals due to governance issues. In response, researchers think that one way to assess the quality of regulatory governance is to examine the quality of their legal and institutional design to see whether they align with critical attributes such as autonomy, transparency, and accountability (Nakpodia et al., 2018; De Almeida et al., 2021). In this regard, the first objective of the current study was to analyse whether PURC's legal and institutional design align with these recognised institutional attributes of effective regulatory governance. The critical attributes considered in the analysis were autonomy and transparency. The findings of this study are discussed below based on these key attributes.

8.3.1 Autonomy of PURC in the electricity and urban water sectors

Similar to the argument of Beecher (2019), the autonomy of a regulator is significant for its regulatory governance quality as it allows the institution to make objective decisions, prevent political interference, gain public trust, and protect consumer interest. Scott's definition of regulation as "a sustained and focused control exercised by a public agency over activities valued by a community" (Scott, 2012, p.1) suggests that regulations protect the well-being of people in society and will require autonomy in their operations. For PURC to achieve regulatory autonomy, it requires legal provisions, institutional design, and a culture that values autonomy.

Given this study's results, the Ghana government, through an Act of Parliament, PURC Act 538 (1997), has shown commitment to establishing PURC to be autonomous. An analysis of the legal and institutional design of the PURC shows that PURC possesses three aspects of regulatory autonomy: managerial, legal and financial autonomies. Unfortunately, it has a fragile structural autonomy, exposing the commission to financial manipulations, political interference, and influence.

PURC's managerial autonomy is viewed in terms of decision and rule autonomy. Decision autonomy is underscored by the Act's provision that the commission is not subject to external control in its functions. For example, section 8 of the PURC Act (538) states that: "The commission is not subject to the direction or control of a person or an authority in the performance of its functions" (PURC Act, 538, 1997, p. VI-5003). Additionally, the Act criminalises interference, emphasising the protection of PURC's operational autonomy. For example, Section 40 of the Act states:

A person who obstructs or interferes with a member, an officer, or any other person employed by the commission in the exercise of the powers conferred or duties imposed by or under this Act commits an offence and is liable, on summary conviction, to a fine not exceeding one thousand penalty units, to a term of imprisonment not exceeding five years, or to both the fine and the imprisonment (PURC Act (538), 1997, p. 14).

Additionally, the Act guarantees the rule autonomy aspect of managerial autonomy. Section 48(1) states that "The board may, by legislative instrument, make regulations that it considers necessary for the implementation of this Act." (PURC Act (538), 1977, p. 16). In this regard, PURC has formulated several legal instruments, rate setting guidelines, and standard operation

procedures (SOPs) to guide its operations, including L.I. 2413 (2020), which provides guidelines on handling consumer services.

Verhoest et al.'s (2004) criteria for assessing the autonomy of government organisations provide a valuable framework to understand this finding. According to them, managerial autonomy is high if the agency has the authority to set procedures by itself; for example, financial transactions within general principles concerning the use of inputs set by the central government.

PURC's financial autonomy emanates from a regulatory levy created through Act 800 (2010). The levy provides a stable funding source, allowing PURC to independently finance its operations and infrastructure. As a result, unlike previously, when PURC depended on the central government to finance its budget, PURC now has a dependable funding source through the levy. This dimension of PURC's autonomy is at its maximum. According to Verhoest et al. (2004, 107-108), financial autonomy is at its maximum if "the agency is financed exclusively through income from other sources than central government (e.g. tariffs, contributions and prices).

Additionally, the PURC has possessed legal autonomy since the law was established - the PURC Act (538) of 1997. This law gives it a legal personality. Legal autonomy is high if "the agency has a legal personality under public law and is created by a parliamentary act" (Verhoest et al, 2004, p. 108).

8.3.1.1 Limiting factors to PURC's regulatory autonomy

The current study found several limitations to PURC's autonomy. Firstly, there appears to be some level of manipulation of the financial autonomy of PURC by external forces, including its most potent regulatees. Thus, there needs to be more transparency in implementing the regulatory levy. The levy is charged to the transmission service collected by ECG. Hence, ECG

calculates the percentage fixed by the regulatory levy and distributes the total sum to the various beneficiaries according to the criteria in Act 800 (2010). However, the size to be received by PURC largely depends on several factors, including the ability of the ECG to collect their revenues, the sincerity of ECG to declare the whole sum collected and third, the willingness of ECG to disburse the sum collected in time. Thus, PURC will have difficulty financing its budget if ECG decides not to credit the accounts of PURC with the revenues collected or when they delay crediting the accounts of PURC.

This study found that over three separate periods—March to July 2023, December 2023, and January to February 2024—ECG failed to remit the regulatory levy collected to PURC and other industry players. As a result, most beneficiary organizations, including PURC, struggled to finance their budgets during these periods.

Therefore, this study concludes that while PURC has a reliable source of funding through the regulatory levy, there is a critical need for transparency on the part of ECG, particularly in accurately declaring total collections of the regulatory levy and ensuring timely disbursement to PURC and other stakeholders. Until this is achieved, PURC's financial autonomy remains threatened.

Another limiting factor to PURC's regulatory autonomy is the inherent weaknesses in its structural autonomy, which comes from the manner of institutional design, appointment procedures, governance structure and more. Each of them is discussed in the subsequent points.

First, regarding appointment procedures, the study's results revealed that the PURC Act specifies presidential appointments without clear qualification criteria. This gives the president so much leverage over the appointment of board members. Out of the nine board members of PURC, the president appoints five. Verhoest et al. (2004) wrote that an agency has a low structural autonomy if the central government appoints the "agency head. He is accountable to

the central government and a supervisory board with most members representing the central government. The government could resign its representatives in the supervisory board at any time." Therefore, the president's appointment of more than half of the board members, including the Board chairman and the Executive Secretary (ES), significantly affects the opportunity to make PURC autonomous since it exposes the organisation's heads to political interference.

Second, there is a lack of tenure security in the office. The study found that the PURC Act gives board members no fixed tenure of office, nor does it safeguard them from arbitrary removal by the president. For example, Section 5 of the PURC Act, 1997 (538) provides that "A member of the board, other than the executive secretary (ES), shall hold office for a period not exceeding five years and is eligible for re-appointment." (PURC Act, 1997). The gap in this provision is that the president can remove a board member at any time since the provision does not necessarily set a minimum number of years a board member can hold office.

Verhoest et al. (2004, 107) indicate that an agency has a low structural autonomy if "the government could resign the representatives of the government in the supervisory board at any time."

Third, board members report to the president. The study's findings reveal that PURC reports to the president through the Chief of Staff, limiting administrative autonomy. While some respondents see this arrangement as a mechanism of accountability, others raised concerns about potential political influence. Once again, Verhoest et al.'s criteria provide a guide to interpret this. According to them, structural autonomy is low if the central government appoints the "agency head."

Another area for improvement is the transitional gap. The current study found the need for a straightforward transitional procedure for the board members, leading to operational challenges

during government changes. A case in point was how the delay in appointing a new board after the 2020 election affected PURC's tariff decisions. Thus, the commission is the board; the secretariat can make significant decisions such as tariff-setting with the board.

This study has found that while PURC has relative managerial, legal, and financial autonomy, structural autonomy is weak. Political interference, influenced by appointment procedures, job security issues, and reporting structures, hampers PURC's ability to operate independently.

Therefore, while the government has demonstrated some commitment to making PURC autonomous, more is needed. First, the government has made a significant commitment to passing Act (533), 1997, and Act (800), 2010, to create and guarantee PURC relative managerial, legal and financial autonomy. However, there is a stark contrast between the legal autonomy granted and the practical autonomy exercised by PURC. Political interference, particularly in tariff decisions, emerges as a significant challenge.

Additionally, the findings suggest that decisions, especially those unfavourable to the executive, face scrutiny and potential rejection. The perceived need for presidential approval before tariff announcements implies a departure from the intended autonomy outlined in the Act. These structural weaknesses, particularly the appointment by the president and the reporting of the board to the president make the president the principal of the Commission, as seen in the Brazilian context (Hanretty & Koop, 2012). Hanretty and Koop (2012) call this arrangement 'presidential dominance' (p.1).

The public interest theory, the capture theory, and the credible commitment theory, which complement each other, collectively offer a comprehensive lens to analyse and interpret the complexities of PURC's autonomy in the regulatory landscape. The study underscores the importance of aligning legal, financial, and structural autonomy to fulfil the intended regulatory mandate truly.

First, the credible commitment theory provides an appropriate framework to understand the findings. According to the theory of credible commitment, in designing regulatory policy reforms, politicians often choose to create independent regulatory agencies rather than using government bureaucracies in order to indicate their commitment to investors that they would not interfere in the regulatory process by pursuing their private interests including electoral fortunes (Majone, 1997). Hence, in designing these independent regulatory agencies, they choose institutional characteristics such as autonomy and clearly defined roles to tie their own hands to prevent political interference in the work of the regulatory agency (Cetin, 2011).

Second, the regulatory capture theory is apt for understanding political interference. According to this theory, regulatory agencies, influenced by political interests, may deviate from their intended autonomy and act in the interest of elected officials. The instances of political interference in tariff decisions align with the theory of regulatory capture, suggesting that PURC's actions may be influenced by the political motivations of government officials seeking electoral support.

Third, the public interest theory of regulation provides insights into the challenges related to legal and structural autonomy. While the legislative framework outlines the intended legal autonomy for the greater public interest, the study reveals that structural weaknesses compromise the practical realisation of this autonomy. The appointment procedures, reporting hierarchy, and governance structure must align with the public interest to ensure effective regulatory governance.

This also corroborates the findings of Reels (2014), who found that while the government of Brazil created an IRA due to credible commitment, in practice, the government did little to prevent political interference. It also confirms the earlier findings of Busuioc (2009) that the

actual independence displayed by IRAs is usually lower than the formal independence granted them by the formal legal rules.

8.3.2 Regulatory Transparency of PURC

Transparency is essential in regulatory governance as it promotes public awareness, accountability and trust. According to Grimmelikhuijsen et al. (2021, 19-20), transparency involves releasing adequate "information of decision-making processes, budgets, operations, or performance of governmental bodies" to stakeholders to enable them to do "inward observability, to allow external stakeholders to monitor the internal operations of an organisation." The findings suggest that PURC is generally seen as transparent in its operations, notwithstanding a few limiting factors. In addition to the room provided by the legal and institutional design for enhancing regulatory transparency, PURC has also taken initiatives to enhance its transparency to stakeholders. These are discussed below.

To start with, there is the mechanism of institutional representation. The PURC Act (538) (1997, p. VI-5003) provides that the commission shall comprise a chairperson, an executive secretary, one representative each nominated by the Trade Union Congress (TUC), the Association of Ghana Industries (AGI), and domestic consumers, as well as four persons with knowledge in matters related to the functions of the commission. Bringing such institutions on the board helps to ensure that the interests of significant stakeholders affected by the decisions of the commission are considered. However, according to stakeholders of PURC, the number of stakeholders on the board needs to be widened to include more stakeholders such as chiefs, civil society, the media, and the utilities being regulated. Institutional representation is a democratic feature as it enhances transparency and accountability. In fact, according to Maman (2020), representation is an essential democratic quality of regulatory agencies.

Next, the publication of tariff proposals and decisions. Another formal mechanism PURC puts in place to enhance transparency is the publication of tariff proposals and final tariff decisions. These are published on its websites, print media, and social media handles. Regarding the tariff decision, PURC, besides the mass media and other channels, is required under section 19 of PURC law to publish it in the gazette (PURC Act 538). The analysis shows that PURC has done so well in this regard, as it has consistently followed laid-down procedures to ensure that it communicates its activities and decisions to the public, including the reasons behind those decisions. Additionally, the fact that PURC goes beyond formal communication options to include social media technologies to reach out to wider stakeholders to explain the justifications for the tariff decision signals a higher commitment to transparency.

Beyond these legal requirements, PURC has taken initiatives to enhance its regulatory transparency. These include public consultations on tariff decisions. As part of transparency processes, PURC invites the public utilities to submit tariff proposals for consideration. After this, PURC organises public forums, such as town hall meetings, to get the utilities to explain the proposal's rationale. PURC then allows the public to share their views on the proposals submitted by the utilities. After these processes, PURC determines the tariff based on the submissions made by various stakeholders and the other socio-politico-technical factors at the time. Additionally, as a feature of transparency, PURC allows utility service providers also to initiate tariff adjustments. This underscores a system of transparency and fairness in the tariff-setting processes of PURC.

Another transparency mechanism used by PURC is public education and training. Through education and training, PURC provides stakeholders with the requisite insight and knowledge to understand the regulatory processes. The rationale is that regulation is highly technical, so one can adequately participate in the processes with appropriate training. This enhances their

capacity to participate in the regulatory processes. For example, the analysis shows that through such education, stakeholders are becoming increasingly emboldened to point out and challenge PURC in areas they find unclear or unfavourable to them.

Moreover, PURC pursues transparency by submitting itself to international observations. The PURC has submitted itself to the Peer Review and Learning Network (PRLN); PRLN is an intercontinental platform designed to facilitate experiential learning and sharing between the CEOs of electricity regulatory institutions in Kenya, Namibia, Uganda, South Africa, and Ghana. The objectives of the PRLN, among others, are to enhance leadership and management capability among African electricity regulators, leading to increased credibility, transparency, and robustness of regulatory decisions. Additionally, PURC submits itself to being observed by the international community. For example, the World Bank, the IMF and the African Development Bank (AfDB) conduct reviews of the activities of PURC to analyse its effectiveness and challenges. Additionally, the PURC has received and participated in several Benchmark studies from sister regulations and utilities in Africa. Countries involved include Kenya, Zanzibar, Uganda, Namibia, Tanzania, Gambia, Burkina Faso, and South Africa.

Finally, PURC ensures transparency through technology. PURC has adopted technological devices such as tariff reckoners and PURC electricity consumption estimator (see Appendix 4), which allow consumers to check how much power they buy and consume. There is also a consumption calculator, which allows consumers to calculate how much power they consume. The PURC won the Innovative Project of the Year award during the 7th Ghana Energy Awards (Ghana Energy Award, (2024)). These revelations suggest that PURC has put in place put enough formal mechanisms in place to enhance transparency

8.3.2.1 Limiting factors to PURC's regulatory transparency

The study also found that PURC needs to overcome several limiting factors, including insufficient transparency in the tariff calculation model. Stakeholders of PURC think that while PURC does well in publishing its tariff formula and some of the factors it considers when calculating tariffs, some key variables are never disclosed to the public. As a result, it is impossible to predict or calculate the following tariff PURC would give. Unlike the National Petroleum Authority (NPA) formula, which one can easily follow to predict the subsequent fuel adjustment by putting the available variables into the model, it is excruciatingly difficult to follow the PURC model to arrive at the tariff. The study found that a significant reason for this gap is that some of the variables used by PURC in tariff calculation are not easily predictable, like those used by NPA. Thus, PURC considers many political, social, economic and technological factors during regulation. All these factors affect the tariff outcome.

Thus, there are social and political factors beyond the technical and economics, such as trust, equity and justice, affordability, security, and government behaviour. These variables cannot easily be predicted, quantified and put into the tariff formula like the National Petroleum Authority can do theirs. The analysis showed that this is one of the critical nightmares for regulators, particularly those who operate in contexts like Africa, where these factors are highly volatile.

Therefore, the regulator often uses discretion to determine these variables, underscoring the autonomy of PURC in tariff-setting decisions.

Another limiting factor to PURC's transparency issue is the perceived symbolic participation, which, according to stakeholders, the public engagement conducted by PURC during tariffs is but a formality. This perception is based on the idea that PURC often only goes back to stakeholders after arriving at its interim decision to tell them how they arrived at that decision.

For example, some board decisions are published in some countries, including Uganda, but PURC does not publish the interim decision, only the final one. Therefore, though PURC consults stakeholders before the tariffs are set, the stakeholders need to know whether their views count in the final tariff decision of PURC. This reflects what political scientists describe as “symbolic participation” or “half-hearted consultation (Malesky & Taussig, 2017, p. 1746), which suggests a situation where a regulator consults stakeholder without making the participants feel that their opinions matter in the actual rule-making.

Institutional theorists warn that symbolic participation could lower adherence to other rules meant to enhance the quality of regulation. In other words, it may significantly cause regulatory non-compliance among regulated firms (Malesky & Taussig, 2017).

Furthermore, a limiting factor to PURC’s transparency mechanism is board members’ allegiance. A significant feature in governance is that board decisions are published as collective decisions without dissenting views and voting given prominence. In most instances, swearing the oath of secrecy helps protect the board from external forces. In the context of PURC's regulatory governance structure, where there is the feature of institutional representation, questions of allegiance arise because some board members have obligations to their constituents, including briefing them on matters affecting them. However, they are expected to adhere to the principle of collective decisions, including non-disclosures, as members of the PURC board. This is a significant issue of transparency and accountability in regulatory governance.

Unfortunately, this conflicting allegiance in the current study may impede the gains inherent in institutional representation. Institutional representation is a means of transparency and accountability that helps offset the democratic deficits inherent in delegated regulation to IRAs.

According to Braun and Busuioc (2020), institutional representation legitimises the regulator and enhances the reputation of the regulatory process.

Finally, another affront to PURC's transparency is visibility, which involves public awareness of PURC's roles and functions. The analysis suggests that PURC needs to be more visible. Stakeholders think many Ghanaians must learn about PURC and its roles and functions. They think PURC needs to be more transparent when there is a tariff adjustment. Additionally, the analysis suggests that though PURC is doing well in recent times in improving its visibility, people in the informal sectors and residents in the rural areas need to see PURC more.

Overall, this study has found that PURC is doing well in terms of transparency but needs to improve transparency in the tariff-setting model. These findings can be understood from both public interest and regulatory capture theoretical perspectives. Public interest theory justifies regulation as a tool for promoting the social welfare of the public. Regulatory transparency provides a crucial tool for achieving these ends. The OECD Council on Regulatory Policy and Governance recommends that member countries:

Adhere to principles of open government, including transparency and participation in the regulatory process to ensure that regulation serves the public interest and is informed by the legitimate needs of those interested in and affected by regulation. This includes providing meaningful opportunities (including online) for the public to contribute to preparing draft regulatory proposals and the quality of the supporting analysis. Governments should ensure that regulations are comprehensible and transparent and that parties can easily understand their rights and obligations (OECD, 2009).

Additionally, the capture theory of regulation argues that regulators are susceptible to being 'captured' by organised interests rather than considering the broader public interest (Peltzman, 1976). Hence, a high level of transparency is crucial for ensuring stakeholders can monitor the regulatory processes to prevent possible capture by external forces.

8.3.3 Summary of section

This section discussed the findings of the first objective, which sought to assess the extent to which PURC's legal and institutional design align with critical attributes of effective regulatory governance, specifically autonomy and transparency. This study has found that while the PURC Act (531) (1997) clearly states that PURC shall not be subject to any person or authority in performing its functions, PURC suffers political interference in practice. The reason is that while PURC's managerial, financial, and legal autonomy is commendable, PURC's structural autonomy needs to be stronger, not opening up for political interference and influence. These structural weaknesses arise from weak institutional safeguard mechanisms related to appointment procedures, weak tenure security for board members, and the nature of the environment in which PURC operates.

Additionally, while PURC has put enough transparency measures in place, there needs to be more transparency in the tariff-setting model due to the unpredictability of some of the variables used in determining the tariff. Due to these socio-politico-technical challenges, PURC needs to demonstrate more transparency to consumers because they have not protected their interests regarding access to safe and reliable utility services. Similarly, PURC cannot give utility service providers cost-reflective tariffs that reflect their operations' costs. This has led to severe problems of poor service provision and regulatory non-compliance. Therefore, PURC needs to improve its transparency mechanisms, particularly regarding the tariff-setting model. Dudley and Wegrich (2016) highlight the significance of transparency in the regulatory

process, particularly in impact analysis and public comment procedures, to ensure regulatory quality.

Overall, the legal and institutional design of PURC is undoubtedly one of the best in Africa (AfDB, 2018,2022), yet there is more room for improvement. Some reforms in the formal and informal rules may enhance the quality of PURC's regulator governance in the electricity and urban water sectors. Guérin (2003) emphasises the importance of high-quality design and implementation of regulatory regimes, including incentivising regulators to create and operate effective regulations. Essentially, some reforms will be necessary in this regard. This aligns with the assertion of Zhang (2010), who emphasises the importance of regulatory reform in developing countries, focusing on formal and informal institutions to improve regulatory governance. A recent study by Arthur et al., (2024) found that “improving regulatory quality and institutional strength significantly reduces electricity losses in Ghana, highlighting the need for strategic policies to enhance efficiency and reliability in the electricity sector.”

8.4 PURC's Regulatory Responsiveness in the Electricity and Water Sectors

This section discusses the findings of the study's second objective, which sought to assess the extent to which PURC has delivered regulatory responsiveness for stakeholders in the electricity and urban water sectors. Responsiveness asks representatives to adopt policies preferred by the people (Hong & You, 2018). By adopting regulatory responsiveness, IRAs can infuse democratic principles into the regulatory process. The current study's findings suggest that PURC has implemented several mechanisms to provide responsive regulation for stakeholders. These are discussed below.

8.4.1 Flexibility pathways

Flexibility is a significant pathway to regulatory responsiveness. The analysis shows that PURC has implemented several mechanisms to adapt to new situations. These include first,

setting broad guidelines so that officials have enough flexibility to choose which detail to follow in responding to unique or changing circumstances; second, continuous technological transitions and innovative processes. PURC continues to find innovative ways of solving issues through technological advancement. Recently, they have developed mobile applications such as the tariff reckoner and electricity consumption estimator, which allow consumers to calculate and monitor their electricity consumption levels. In addition, PURC has migrated from a paper-based reporting system to a database management system. For example, they have a database management system that allows for easy reporting and information sharing among the offices of PURC. PURC is developing a second database management system, DBMS II, to share information with utility service providers on a common platform. PURC has also partnered with the Energy Commission to devise innovative ways, including introducing intelligent prepaid meters for the utilities and renewable energy transition initiatives.

Despite these gains, the analysis identified two key limiting factors to PURC's flexible practices: donor influence and legal restrictions. Firstly, PURC still has its aprons tied to international donors who usually require them to follow specific prescribed paths, thereby stifling PURC's initiatives in other areas. Secondly, PURC is a creation of law, and it is expected to act within certain legal frameworks and procedures, which sometimes stifle its initiatives in some other areas.

Overall, this study has found that PURC is a dynamic organisation because it has successfully implemented flexible operational and administrative practices to respond swiftly to changing circumstances. This is good for responsiveness. Burman and Zaveri (2017) found that flexible laws are essential to regulatory responsiveness in the Indian context.

8.4.2 Stakeholder Engagement

Stakeholder engagement is one activity that makes an organisation responsive to its stakeholders. It allows IRAs to involve their constituents in their decision-making processes. According to Braun and Busuioc (2020), stakeholder engagement, if done well, can serve as a means of legitimising the regulatory process. The current study's findings indicate that stakeholder engagement is one of the most essential activities of PURC. The stakeholder activities used by PURC can be put under two broad themes: public participation and multiple communication options. Each of these themes and their sub-themes are discussed below.

8.4.2.1 Public Participation

The current study found that PURC has put a significant number of mechanisms in place to enhance the participation of stakeholders in its regulatory decisions. These mechanisms include institutional representation, which brings diverse and well-rounded skills and perspectives to the board. For example, there is labour, industry, government and consumers. Second, stakeholder consultations involve reaching out to key stakeholders, including utility service providers, the Association of Ghana Industries (AGI), labour, government, consumers, and the general public, to consider their concerns when making tariff decisions. Third, consumer service clinics bring together utility service providers and consumers to receive training and education on new developments in the industry. The analysis further indicated that these recent participatory approaches have been more aggressive and proactive. According to respondents, unlike previously, PURC reaches out to the public on post tariffs announcements, instead of public engagements before announcements.

Unfortunately, the study identified some shortfalls. The first is that PURC does more public consultations during significant tariffs but little during the quarterly adjustment; meanwhile, quarterly tariffs sometimes come with higher tariff increments, necessitating equal stakeholder consultations. Secondly, these stakeholder meetings usually need to be more representative.

That is, PURC tries to invite various stakeholders to its town hall meetings. However, the stakeholders usually need to be more diverse and wider enough and many times, discussions are primarily skewed towards consumers' concerns, thereby burying other equally essential discussions.

Overall, PURC's aggressive and proactive participatory avenues are commendable since they can ensure that regulatory activities are pursued along with public interest orientation. However, it is important also to point out that a narrow stakeholder consultation may lead to adverse outcomes, including delegitimisation and regulatory bias (Braun & Busuioc, 2020). Regulatory bias, according to the theory of regulatory capture, can arise from poorly conducted stakeholder consultations (Braun, 2016).

8.4.2.2 Communication

Effective stakeholder engagement also involves effective communication, which includes providing stakeholders with enough options to communicate with the regulator. The current study found that PURC has provided various communication options to enable communication between them and stakeholders. These include print media options such as letter writing, press releases, newspapers, and souvenirs, as well as electronic technologies, which include formal options such as television, radio, e-mails, and phone calls, in addition to social media platforms such as Instagram, Facebook, Twitter, and WhatsApp messenger. Furthermore, PURC does a lot of radio and television communications. The variety of communication options further emphasises PURC's commitment to reaching broad and diverse stakeholders.

Unfortunately, despite these numerous options, many stakeholders do not know about some of them. For example, the analysis revealed that only a few stakeholders visit the PURC website. Similarly, only a few respondents knew about PURC's toll-free number. This suggests a gap in the way these channels are deployed. PURC may not have been strategic enough in their

communications. Bourne (2018) asserts that stakeholders have different cultures and interests. Hence, effective stakeholder communications must go beyond a 'one-size fits all' approach to embrace targeted communication. In targeted communication, the regulator must acknowledge that stakeholders have varying uniqueness; hence, they should plan to incorporate these differences into specific messages to engage their stakeholders more effectively (p.438).

8.4.3 Timeliness

The last indicator to assess PURC's regulatory responsiveness was timeliness in responding to stakeholders' concerns and petitions or complaints. This study found that the public generally has a positive perception of PURC's timeliness. For example, they respond swiftly to stakeholders' concerns and complaints and can handle regulatory deadlines, particularly regarding complaints brought before them. The analysis shows that many deadlines missed are due to delays on the side of the respondents (mostly utility service providers) in responding to the complaints.

However, stakeholders expect PURC to demonstrate proactivity in ensuring that utility service providers adhere to their obligations of providing quality, safe and reliable service to consumers. This will save the consumer the time and resources involved in making complaints to PURC. Similarly, the analysis shows that PURC needs to meet its tariff-setting deadlines, particularly regarding the quarterly tariff reviews. For example, PURC must consistently meet its Quarterly Tariff Review (QTR) schedule, particularly from 2015 to 2017 and 2021 to 2022. As discussed earlier under transparency in the previous section, two major factors usually account for their missing tariff review deadlines. The first is the unpredictability of the socio-politico-economic factors. According to PURC respondents, tariff decisions usually affect the country's political, economic and social fabrics; hence, adjusting the tariff sometimes does not make economic sense. Secondly, transitional gaps also affect PURC's operations. Thus, in the event of a change of government, and the president does not appoint a new board, the

commission cannot make significant decisions, including decisions on tariffs. Also, the nature of the complaint sent to the utility service providers could account for missing deadlines; for example, technical issues would need time for proper investigations.

8.4.4 Section summary

Overall, this study has found that PURC has provided regulatory responsiveness for stakeholders. First, PURC has adopted robust stakeholder engagement strategies, including participatory approaches and providing many communication options to enhance stakeholder communication. Additionally, PURC has responded promptly to stakeholders' complaints or concerns. More importantly, it is a positive sign that PURC's responsiveness, particularly in stakeholder engagement, is rising and becoming more aggressive than before. These developments signal a more encompassing transition of the regulatory state from a more 'responsible to responsive' approach to regulation (Koop & Lodge, 2020). These findings can be understood from the lens of the public interest theory, which states that regulation seeks the public's welfare. Responsiveness is crucial in attaining such ends.

However, to enhance these gains, PURC must improve in some areas, especially in taking proactive measures to address the concerns of stakeholders and getting utility service providers to comply with deadlines during complaint settlement redress. Additionally, the PURC should widen its consultative net to make it more representative. Baldwin (2018) found in a previous study that the conventional methods of regulating the electric sector need to be revised to address the current opportunities and challenges in the industry. In reaction to the evolving conditions within the electric sector, numerous jurisdictions and regions have adopted governance approaches that are more adaptable, collaborative, deliberative, and inclusive. These approaches foster cooperation among diverse stakeholders to effectively tackle emerging issues and facilitate coordination across different policy arenas. In the context of public interest regulation theory, responsiveness, particularly stakeholder engagement, can be enhanced.

8.5 PURC's Regulatory Credibility in the Electricity and Water Sectors

The third objective of this study aimed to analyse whether PURC has effectively delivered regulatory credibility for stakeholders in both the electricity and urban water sectors. To realise this objective, credibility was measured using five critical indicators adapted from the credible commitment literature (Maggetti, 2010; Gilardi, 2008; Levi-Faur, 2011) and the regulatory trust literature (Six & Verhoest, 2017). These include autonomy from elected politicians, predictable timelines in policies and decisions, autonomy from regulators, autonomy from powerful businesses/interest groups, and trust from stakeholders. Each of these indicators served as the central theme in the presentation of the findings.

8.5.1 PURC's Autonomy from Elected Politicians

This indicator is rooted in the idea that politicians seek policy credibility, so they delegate regulatory functions to IRAs to safeguard regulation against themselves. This is done to assure investors they will not interfere in the regulatory process to pursue their opportunistic motivations. Therefore, by analysing the credibility of the PURC along these dimensions, the current study sought to find out if the PURC has autonomy over elected politicians.

The analysis illuminates the perception of political interference in PURC's decision-making processes. This perception is rooted in political interference cited by respondents, including elected officials influencing tariff decisions for political considerations. The document analysis substantiates these claims, providing firsthand accounts from energy experts and government officials who attest to political pressures shaping regulatory decisions. First, in 2018, His Excellency, Nana Addo Dankwah Akuffo Addo, in a meeting of the 8th Salon Academy of the National Association of Beauticians and Hairdressers, announced a tariff decrease and the decrease was captured in the 2018 national budget even at a time PURC had not yet finished with its public engagements. In response, PURC had to announce a downward tariff review in line with what the president had announced earlier.

Second, during the regime of ex-president John Agyekum Kuffour, the president sought to get PURC to refrain from announcing an upward tariff decision they had arrived at, but PURC boldly declined. When the government insisted on the reduction, the then-board chairman of PURC, Mr Andrews Kwame Pianim, resigned.

Additionally, respondents think that the fact that PURC seeks the president's approval before announcing tariff decisions raises suspicions that they are being influenced. Thus, they questioned why PURC always visits the president's office each time they arrive at their final tariff decision.

However, it needs to be clarified whether and how often elected politicians succeed in influencing the outcome of PURC's decisions. This is because the study found evidence to support the fact that PURC sometimes resists such political influences. For example, one respondent who is a current government official testified that during his time as the energy minister, he once called the PURC executive secretary to enquire about tariff issues, and to his surprise, the then E.S. boldly refused to comply with his proposal and asked him to refrain from interfering in matters of tariff. Therefore, the resignation of the Board Chairman in response to government pressure and the refusal of the Executive Secretary to comply with a minister's demands underscore PURC's dedication to protecting its regulatory power and credibility.

Credible commitment and public interest theory provide a relevant analytical lens to interpret these findings. The credible commitment theory suggests that governments establish independent regulatory agencies to signal a commitment to investors and stakeholders that private interests, including political considerations, will not sway regulatory processes. The institutional characteristics of autonomy and clearly defined roles are intended to bind the government's hands and prevent interference.

This study acknowledges the government's commitment to creating PURC as an independent body, as evidenced by legislative acts. However, the findings suggest that the commitment needs to be improved, allowing for political interference. The analysis identifies specific weaknesses in the institutional structure design of PURC, such as poor appointment procedures, lack of job security, and reporting structures, which render it susceptible to political influence.

The public interest theory posits that regulation is designed to serve the broader public interest. However, there is a tension between the government's commitment to regulatory autonomy and the perceived political pressures influencing PURC's decisions. This tension suggests a misalignment between regulatory goals and political considerations, raising questions about the extent to which PURC operates in the public interest.

In conclusion, the study underscores the need for a closer examination of the institutional structural design of PURC and the broader institutional context of Ghana, where, due to vast appointment powers, the president has become the principal of almost all government institutions. While the government has taken steps to establish an autonomous regulatory body, the study suggests that more robust structural safeguards are necessary to prevent undue political influence.

This also corroborates the findings of Reels (2014), who found that while the government of Brazil created an IRA due to credible commitment, in practice, the government did little to prevent political interference.

8.5.2 PURC's Predictable Time - Consistency in Decisions and Policies

A major feature of the credibility commitment perspective is predictable-time consistency. This indicator measures PURC's consistency in delivering regulatory decisions and policies. Regulatory policies and actions are expected to be consistent and predictable over time to achieve policy credibility. This will boost investor confidence in the industry.

The findings suggest that stakeholders generally find PURC consistent or predictable due to the uniformity of its working culture and practices. This is evident in how PURC handles stakeholder engagements, commitment to work, code of conduct, administrative procedures, and complaint redress processes. Thus, the experience an individual gets in one PURC office is highly likely to be the same in other regional offices. PURC officials are guided by Standard Operating Procedures, which guide business conduct.

The analysis shows that PURC needs consistency regarding following its tariff review schedule. There have been instances in which PURC failed to make tariff adjustments. However, according to PURC, they have had to contend with forces of poor economic conditions and political influence while also ensuring that it stays within the policy direction of the government and the revenue requirement of the utility service provider. As a result, amid the hard bites of the global pandemic leading to the unprecedented economic decline and hardship beginning from 2020 forward, it was evident that PURC could not have consistently followed its tariff adjustment plan. Secondly, as noted earlier, after the 2020 election, the president did not appoint a new board for PURC nor gave indications for the secretariat to make decisions until early 2022 when a new board was appointed. Consequently, PURC could only make tariff adjustments during the period commission has the full complement of a new Board appointed by the president.

Once again, credible commitment provides a valuable lens for understanding these findings. Credible commitment by the government seeks to assure stakeholders, particularly investors, of time-consistency of regulatory policies and decisions. To demonstrate their commitment, they establish independent agencies so that they would not unduly, in their discretion, discontinue or alter regulatory policies due to changes in times, including changes in government. This serves as an incentive to investors in the regulated industry.

This study has found that PURC has demonstrated enough regulatory predictability for stakeholders regarding its administrative procedures and complaint redress mechanism. However, it has yet to demonstrate predictability in tariff settings due to the unpredictability of the country's socioeconomic conditions. In other words, while the government has sought credibility by establishing PURC as an independent regulatory agency to prevent its interferences in the regulatory process, it has not been able to fulfil this promise in practice because first, it has not been able to maintain a stable social and economic environment and second, it has not been able to prevent itself from influencing or interfering in the work of PURC.

8.5.3 Autonomy from Regulatees and Powerful Businesses/Interest Groups

This dimension sought to see whether PURC has been captured by the industry players, including those they regulate, influential businesses, and interest groups. The findings did not find any evidence to suggest that the regulated utility providers, powerful businesses or interest groups have captured PURC. However, stakeholders questioned why PURC has been too lenient on the regulations. For example, they were surprised that PURC always grants utility tariff increments but hardly makes downward adjustments. It has only recently been that PURC has made some downward tariff adjustments. Thus, in the last quarter of 2023, electricity was adjusted downwards. However, water was not, and in the first quarter of 2024, the electricity

tariff was adjusted downwards, but water remained the same. Second, PURC cannot ensure that the utilities deliver quality, safe and reliable consumer services (PURC Act, 538).

In summary, the current study has found that while PURC has not been captured per se, there may be some manipulations, including "power-play", which makes it difficult for PURC to enforce its regulatory orders. Mainly, PURC's regulations are also public-owned businesses financed and managed by the government to provide the public with the two most essential utility services. It is, therefore, difficult to bring drastic regulatory actions against them.

Finally, some possible manipulations may result from support for the utilities by powerful government hands or financial manipulation using the regulatory levy. Thus, since ECG is the organisation that collects the regulatory levies and pays them into a cash waterfall account, it could either delay payment or pay less than the amount required to reduce the financial capacity of the regulator and other sector players.

These findings can be interpreted within the lens of the regulatory capture theory, which assumes that regulatory agencies may not always pursue the public's interest because regulation can be captured by the industries it is meant to regulate, leading to regulatory capture and the formation of regulatory cartels (Peltzman, 1976).

8.5.4 Trust from stakeholders

The final indicator used to measure the credibility of PURC in the current study was the level of trust from stakeholders. According to the trust literature, effective regulation with transparency and responsiveness can lead to a high level of trust and legitimacy for the regulator (Six & Verhoest, 2017; Braun & Busuioc, 2020).

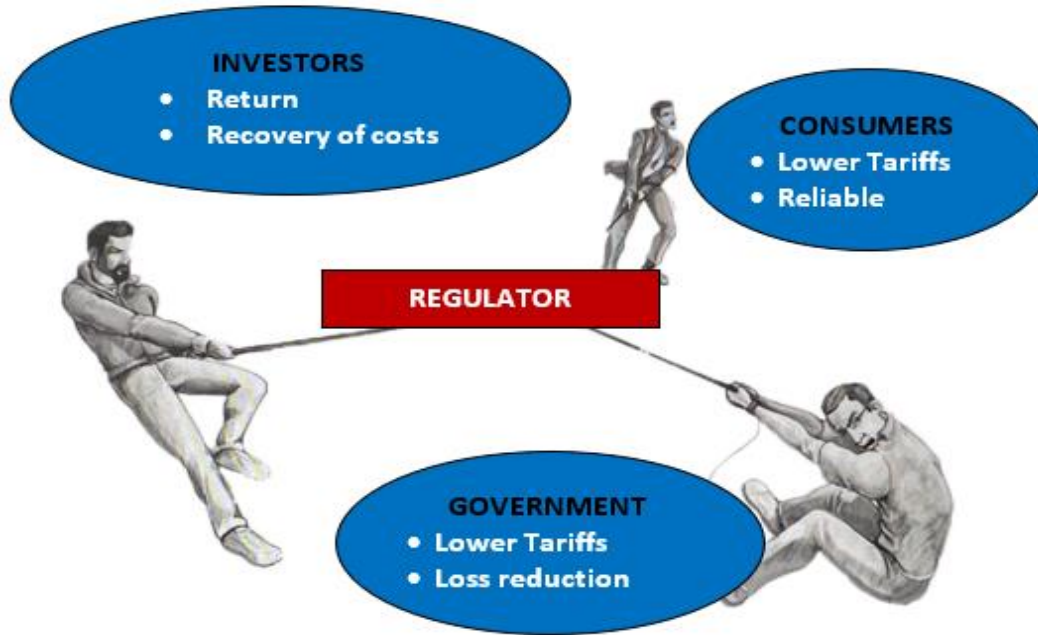
The analysis shows that respondents generally possess a moderate level of trust in PURC. The mistrust for PURC emanates from issues related to the tariff-setting decisions of PURC. For

example, consumers think that PURC does the utilities' bidding by giving them tariff increases whenever they request them. Additionally, PURC has not done enough to punish the utilities for poor service delivery despite continuously giving them upward tariff reviews. On the other hand, utilities think that PURC does not consider their interest because they do not always get the proposed upward adjustment percentage, they submit to PURC. Thus, the utilities expect PURC to appreciate their operational cost and give them a cost-reflective tariff to enable them to cover their cost and make necessary savings to invest in equipment while on the other hand, consumers expect PURC to appreciate their economic challenges and give them tariffs that will not erode their wages. At the same time, the government is interfering in the tariff decisions of PURC because they do not believe that PURC will continuously pursue actions that align with the government's interests. For example, the government fears that unfavourable upward adjustment may have negative implications for their economic policies and the electoral fortunes of the elected politicians. Furthermore, this issue of mistrust for PURC is further exasperated by PURC's inability to return to stakeholders after stakeholder engagements to communicate their interim tariff decisions to them before they are announced to the public. Therefore, respondents think that PURC may be under the influence of government.

As shown in Figure 8.1 below, this conflict underscores the excruciatingly tricky task of PURC in balancing stakeholders' interests. Thus, each action PURC takes will only be in the complete interest of some parties, including the consumer, the utility service provider, and even the government.



Figure 8.1: The challenge of balancing stakeholder interest



Source: Author's demonstration (2024).

Notwithstanding this tariff-related mistrust, the study found that stakeholders possess a high level of trust for PURC in areas such as the fairness of complaints redress mechanism, professionalism, and positive organisational culture. Thus, stakeholders, particularly consumers and utilities with experiential knowledge of such attributes of PURC, express high levels of trust. In Tamale, for example, the utilities, particularly NEDCo, rely heavily on PURC to get consumers to comply with some requirements, including paying bills and accepting prepaid meters. Again, the community trusts PURC so much that when people are dissatisfied with the services of the utilities and go on demonstrations or protests, they call PURC to intervene.

PURC has become the most reliable and credible mediator between communities and utility service providers. This was also witnessed in Kumasi, where assembly members would rely on PURC to resolve their people's challenges with utility service provision.

Despite the political interference in the decisions of PURC, this study found that PURC is highly trusted by the government, suggesting a commendable level of credibility. Respondents say PURC is one of Ghana's most credible government organisations. Therefore, it has become a source of credible information for government and international development organisations, including the IMF, the World Bank, and other development partners. The recent IMF negotiation had PURC implement six of the nine conditions before the bail-out's first and subsequent second trench was credited to Ghana's accounts.

These findings align with a study in Brazil which assessed the effect of political interference on the resilience of regulatory institutions. Surprisingly, the results suggested the strong resilience of regulatory agencies despite significant attempts at political interference by influential presidents. However, while the general institutional endowments of both countries may vary, in the case of Ghana, the continuous resilience and credibility of PURC can be attributed to the positive organisational culture of PURC, support from the international community, and the nature of the good relationship between the PURC and government. Thus, there is high support from the government because regulatory policies in the electricity and urban water sectors have been designed as a top-down approach where the regulator consults the president's office.

Zhang and Thomas (2009) have recommended that an effective regulatory policy be designed as a top-down approach to enjoy the support of the top political class.

8.6 Section summary

The findings can be understood with insight from the public interest, capture theory, and credible commitment perspectives. First, PURC's efforts to balance stakeholder interests and its role as a mediator demonstrate a commitment to serving the broader public interest. Second, the concerns raised about PURC's tariff decisions reflect capture theory elements, where

influential stakeholders' preferences may influence regulators. However, the study highlights the regulator's efforts to navigate conflicting interests. Finally, PURC's credibility, despite political interference, can be explained through the credible commitment theory. The positive organisational culture, international support, and a top-down regulatory policy design create a commitment that withstands external pressures.

The study underscores the multifaceted nature of trust in regulatory bodies. Despite challenges, PURC's credibility is sustained through effective complaint resolution, a mediating role, and a commitment to balancing stakeholder interests. The findings align with established regulatory theories, emphasising the importance of organisational culture, policy design, and stakeholder engagement in building and maintaining regulatory credibility.



CHAPTER NINE

SUMMARY, CONCLUSION AND RECOMMENDATION

9.1 Introduction

The overarching aim of the study was to conduct a comprehensive qualitative investigation into the regulatory governance of the Public Utilities Regulatory Commission (PURC) in Ghana, assessing the alignment of its legal and institutional design with recognised features, specifically autonomy and transparency, for effective regulatory governance, to conduct an in-depth investigation of its responsiveness to stakeholders in the electricity and urban water sectors, and to conduct an in-depth analysis of the perceived level of regulatory credibility provided to stakeholders. This central objective raised a significant research question and some subsidiary research questions that guided the study.

This chapter summarises the study's key findings and draws conclusions that form the significant propositions of this research. The chapter is divided into five main sections to facilitate the discourses in this chapter. First, the overview of the thesis is presented. Second, the summary of the key findings of the study is discussed. Third, the contribution of the thesis is presented, focusing on the theoretical, literature and policy implications. The following section presents recommendations for future studies, and finally, the conclusions of this dissertation are presented.

9.2 Overview of the thesis

This thesis analysed the quality of regulatory governance, specifically focusing on the Public Utilities Regulatory Commission (PURC). Its objectives included assessing how PURC's legal and institutional design aligns with critical attributes of effective regulatory governance, including autonomy and transparency. Also, it sought to investigate how PURC has

demonstrated regulatory responsiveness to stakeholders in Ghana's electricity and urban water sectors.

Finally, the study analysed the level of regulatory credibility provided by PURC to its stakeholders in Ghana's electricity and urban water sectors. The study employed a qualitative research paradigm to achieve these objectives, focusing on a case study research design technique. Drawing upon a rich tapestry of theories including public interest theory, regulatory capture theory, and elements of the credible commitment perspective, the study conducted a qualitative study which included one-on-one interviews, focus group discussions, and documentation. Seventy-eight (78) respondents were engaged in in-depth qualitative interviews and focus group discussions.

9.3 Summary of Key Findings

The study's findings reveal a nuanced portrait of regulatory governance in Ghana.

Firstly, while PURC exhibits a moderate level of autonomy, particularly in financial, legal, and managerial autonomy, it has a fragile structural autonomy, which has become the backdoor through which political interference occurs. In addition, the findings showed that PURC has a commendable level of transparency mechanisms in place. However, these gains have been marred by the need for more transparency in the tariff calculation model arising from the non-disclosure of some of the variables PURC uses. It has also been realised that these non-disclosures arise because the variables are economic, political, social, and technical factors that PURC cannot predict so easily.

Secondly, PURC was commendably responsive because, generally, they have put the necessary mechanisms in place to engage extensively in public while responding swiftly to complaints. The adoption of flexible and adaptive administrative and regulatory practices has enabled this. Besides, PURC has provided stakeholders with a wide range of communication options to

enhance communication between stakeholders. This signals a transition from traditional to modern regulation, where democratic features are infused into regulatory governance to offset the democratic deficits inherent in delegation to IRAs.

Several limiting factors were identified in the responsiveness practices of PURC. First, PURC needs a higher level of visibility, as a large section of people need to learn the roles and functions of PURC. Second, PURC needs to be more proactive in addressing the needs of stakeholders. Third, PURC's stakeholder consultations must be narrower and more representative. Therefore, PURC needs to improve its visibility and proactive response and widen the array of stakeholders involved in public consultations. However, all this is achievable with enough resources to undertake these functions effectively and efficiently in the regulatory space.

Thirdly, PURC has a moderate level of credibility. First, it is not autonomous from elected politicians due to political interference and influence. Second, PURC is predictable or consistent regarding its administrative practices and complaints redress mechanism. However, PURC needs to be more consistent and predictable in their quarterly tariff review schedules due to the unpredictability of the country's socio-politico-economic and technical environment. Third, though PURC has yet to be captured by regulators and powerful businesses or interest groups, it suffers political power-play and manipulation of its regulatory autonomy, making it difficult to achieve regulatory compliance.

Moreover, while PURC enjoys the trust of stakeholders due to its effective administrative and complaint redress mechanisms, responsiveness and professionalism, it suffers a high level of mistrust when it comes to tariff-setting decisions. While the utilities think that PURC may be favouring consumers while being influenced by the government in its tariff decisions, consumers also think that PURC is too nice to the utilities, hence giving them an upward review

in most tariff adjustments. Additionally, consumers think that PURC is sitting aloof. At the same time, the utilities continually fail to provide them with safer, reliable, and stable service despite paying tariffs that are almost up to the total cost.

9.4 Contributions of the Study

Scholars generally agree that a doctoral dissertation should make an original contribution to the body of knowledge. The degree of originality required can vary based on the academic discipline. Francis (1976), as cited in Phillips & Pugh (1998), identified various approaches to achieving originality in a doctoral dissertation. These include writing down a significant piece of new information for the first time; continuing a previously original piece of work; providing a single original technique, observation, or result in an otherwise unoriginal but competent piece of research; carrying out original work designed by the supervisor; having many original ideas, methods, and interpretations, all performed by others under the direction of the postgraduate; and finally, showing originality in testing somebody else's ideas.

Considering this context, the current study has uniquely contributed to knowledge in multiple ways. Subsequent sections will elaborate on these contributions, addressing distinct aspects such as empirical literature, theoretical advancements, methodological innovations, and impacts on policy and practice.

9.4.1 Contribution to knowledge of theories of regulation

This study significantly contributes to existing theoretical frameworks, specifically the public interest theory, regulatory capture theory, and credible commitment theory. While these theories have been widely utilised to examine regulatory governance on a global scale, this study stands out as the first to integrate and comprehensively analyse regulatory bodies within the context of Ghana. By weaving together these theoretical orientations, the research offers a nuanced understanding of regulatory governance and its implications, particularly within the

framework of PURC. Identifying structural autonomy challenges and susceptibility to political interference aligns with regulatory capture theory. It expands it by examining specific institutional dynamics in the context of Ghana's utility sectors.

The study also delves into credible commitment theory (Gilardi, 2008; Majone, 1997; Levi-Faur, 2011; Maggetti, 2010), shedding light on the mechanisms in place to enhance transparency and autonomy, thereby contributing to the theoretical discourse on credible commitment within regulatory bodies. The utilisation of public interest theory along the dimensions of responsiveness and transparency allows for examining regulatory actions about societal welfare (Pigou, 1920).

Identifying structural autonomy challenges and political interference aligns with regulatory capture theory, offering a nuanced understanding of institutional dynamics in the context of Ghana's utility sectors. While regulatory capture is well established in regulatory governance literature, we only have glimpses of the mechanisms that lead to regulatory capture. However, this study provides valuable detail on the nature of institutional characteristics and regulatory practices that enhance responsiveness.

9.4.2 Contribution to the knowledge of the institutional and legal framework

By assessing the alignment of PURC's legal and institutional design with fundamental attributes of effective regulatory governance, namely autonomy and transparency, this research contributes significantly to the scholarly discourse on regulatory bodies, particularly in developing countries. The findings reveal a refined landscape where PURC's legal framework showcases commendable autonomy and transparency measures. However, in practice, these attributes are impeded by structural weaknesses and political interference. While PURC enjoys managerial, financial, and legal autonomy, its structural autonomy is compromised, thus

succumbing to political influence. Weak institutional safeguard mechanisms and opaque tariff-setting models exacerbate the challenge, undermining transparency and stakeholder trust.

This research underscores the crucial nexus between regulatory autonomy, transparency, and effective governance. By highlighting PURC's strengths and shortcomings, it offers actionable insights for regulatory reform and enhancement. Despite being lauded as one of Africa's premier regulatory bodies, PURC's potential is hindered by systemic deficiencies. Consequently, the study recommends targeted institutional and legal reforms to fortify PURC's structural autonomy, enhance transparency mechanisms, and mitigate political interference.

9.4.3 Contribution to the knowledge of regulatory responsiveness

This study contributes significantly to the scholarly discourse on regulatory governance, mainly focusing on the responsiveness of independent regulatory agencies (IRAs) and their stakeholder engagement. By examining the performance of Ghana's Public Utilities Regulatory Commission (PURC) within the context of regulatory responsiveness, this research addresses a critical gap in the literature concerning the assessment of IRAs in meeting the needs of their stakeholders. The gap addressed pertains to the need for more comprehensive assessments regarding the performance of IRAs, particularly regarding their responsiveness to stakeholders. Despite scholarly attention to regulatory governance, existing literature must thoroughly evaluate IRAs within these critical dimensions, hindering a comprehensive understanding of their effectiveness in serving stakeholders.

The findings underscore PURC's commendable efforts to provide regulatory responsiveness for stakeholders. Through robust stakeholder engagement strategies and timely complaint resolution mechanisms, PURC demonstrates a transition towards a more responsive regulatory approach. These developments signify a broader shift within the regulatory state towards a

more inclusive and stakeholder-centred governance paradigm, which is in line with the principles of the public interest regulation theory.

This study advances our understanding of regulatory responsiveness by providing empirical insights into PURC's performance within Ghana's electricity and urban water sectors. By highlighting PURC's strengths and areas for enhancement, the study offers actionable insights for optimising regulatory effectiveness and enhancing stakeholder satisfaction. Furthermore, it contributes to broader discussions on governance adaptation and inclusivity in addressing emerging challenges within the electricity and urban water sector.

9.4.4 Contribution to the knowledge of regulatory credibility

This study contributes significantly to understanding regulatory credibility within the context of the Public Utilities Regulatory Commission (PURC) in Ghana's electricity and urban water sectors. By addressing the gap in the empirical consequences of regulatory credibility and exploring PURC's responsiveness to stakeholders, this research augments the scholarly discourse on regulatory governance and its implications for stakeholders' trust and confidence.

The empirical findings shed light on credibility from various theoretical perspectives, including public interest, capture theory, and credible commitment theory. Firstly, PURC's commitment to balancing stakeholder interests and its role as a mediator underscores its dedication to serving the broader public interest. Secondly, concerns regarding PURC's tariff decisions echo elements of capture theory, wherein influential stakeholders' preferences may influence regulatory decisions. However, the study also elucidates PURC's efforts to navigate these conflicting interests, mitigating capture risks. Finally, though PURC suffers instances of political interference unpredictability in quarterly tariff adjustments, it still maintains a high perceived credibility. This is attributed to the credible commitment it has established through

a positive organisational culture, international support, and a robust regulatory policy framework.

Overall, this research unveils the intricate dynamics of trust and credibility within regulatory governance frameworks. PURC's credibility challenges and resilience mechanisms offer valuable insights into the mechanisms underpinning regulatory legitimacy and stakeholder trust. Moreover, the findings underscore the nuanced interplay between institutional design, stakeholder responsiveness, and regulatory credibility, enriching our understanding of regulatory governance in developing country contexts.

9.4.5 Contribution to the knowledge of integrated study

The absence of integrated studies encompassing various dimensions of regulatory governance limits our understanding of regulatory effectiveness and stakeholder trust. This study bridges existing gaps in the literature by consolidating key aspects such as autonomy, transparency, responsiveness, and credibility within the framework of PURC's regulatory oversight. It provides a holistic assessment of regulatory governance dynamics. The empirical findings unveil a nuanced portrayal of regulatory governance within Ghana's utilities sectors. While PURC demonstrates moderate autonomy in certain facets, structural weaknesses expose vulnerabilities to political interference, compromising regulatory independence. Additionally, commendable transparency measures are undercut by non-disclosure in tariff calculation models, stemming from the unpredictability of socio-politico-technical factors.

Ultimately, this study provides a comprehensive understanding of regulatory governance dynamics within Ghana's utilities sectors, offering actionable insights for policymakers, regulators, and stakeholders. Integrating multiple dimensions of regulatory governance and scrutinising PURC's performance against critical attributes enriches scholarly discourse and

informs evidence-based policy interventions to enhance regulatory effectiveness and stakeholder trust.

9.4.6 Contribution to the knowledge of the quality of regulatory governance

Empirically, this study contributes valuable insights to the current understanding of regulatory governance. The findings, particularly regarding political interference, safeguard mechanisms, institutional resources, and various socio-politico, economic, and technical factors, shed light on the nature and implications of regulatory governance within the Ghanaian context. For example, the study finds empirical evidence on how environmental context, institutional and legal design and regulatory compliance challenges affect the work of IRAs. These support the findings that governance issues and contextual factors are why IRAs struggle to achieve their regulatory obligations (Nunes et al., 2015; OECD, 2014; Dye,2020). These are explained below:

9.4.6.1 Socio-politico, economic, technical factors and darkness in the tariff

Consistent with the regulatory governance literature that IRAs are struggling to achieve their objectives due to specific local environmental contexts in which they operate (Jarvis & Savacool, 2011; Levy & Spiller, 1990; Levi-Faur, 2011), the study found that a critical puzzle for PURC in the electricity and urban water sectors revolves around the issue of environmental contexts. Thus, the environmental context in which PURC operates seriously threatens its regulatory activities. It affects its autonomy, transparency, and credibility. These environmental factors are economic, socio-politico-technical factors that PURC must consider in its tariff-setting decisions.

In the current study, economic, socio-politico-technological considerations refer to the multifaceted contexts that affect regulations' development, implementation, and effectiveness. These considerations suggest that regulation is not only an economic, technical or legal

construct but is deeply intertwined with social, political and technological dimensions. Socially, regulations can significantly affect society regarding health, safety, consumer rights, quality of life, equity, and justice. Politically, regulations have ramifications for the broader policy objectives of the government, including economic growth, environmental protection, and public welfare. In addition to the political side, there are the activities of interest groups and lobbying, as well as enforcement and compliance. Compliance and enforcement can be affected by political will and the resources available for enforcement. Finally, the technical dimension is concerned with issues of expertise, data, technology and adaptability.

Balancing these interests can be excruciatingly difficult, yet they are essential in developing regulations that are effective, fair and capable of addressing complex issues.

In the current study, it was realised that balancing the interests of stakeholders in the context of these factors has had severe ramifications for the transparency and autonomy of PURC in the electricity and urban water spaces. PURC, per its Act, is expected to protect the interests of consumers and utility service providers. For example, it is expected to ensure the financial sustainability of the utility service providers while ensuring that consumers are treated fairly regarding quality of service, access and justice. PURC faces severe contextual factors in performing this function, including social, economic, political and technical contexts.

PURC is supposed to ensure that the utilities have the financial capacity to make capital investments and maintain their equipment. This requires that PURC sets economic or cost-reflective tariffs. Cost-reflective tariffs are rates or pricing structures that accurately reflect the actual costs incurred by a utility service provider to produce and deliver their services. It considers operational and maintenance expenses, investments in equipment and other overhead costs. This gives the utilities the requisite revenue to continuously maintain and upgrade their equipment to provide quality, reliable, and safe services. If the regulator cannot give the utility

cost-reflective tariffs, the utility may struggle to provide consistent, reliable service, metaphorically termed “darkness.” In effect, people will be paying tariffs all right, but they will still be experiencing darkness because the power supply will not be stable. This is referred to as “darkness in the tariff.”

In the current study, the situation of “darkness in the tariff” was found. This is because, beyond the technical and economic considerations, PURC recognises that any tariff it approves has ramifications for the social, political and economic conditions at the time. Thus, PURC always has to consider the economic conditions of the country as well as the political climate before approving tariffs. It also reveals that these same factors occurred during the central tariff review in November 2022. However, PURC approved an upward tariff adjustment; it did not approve the exact figures the utilities submitted for consideration.

Thus, beyond the technical and economic computations, PURC also considered the economic situation of the people as well as the political climate at the time. The net effect is that there is the likelihood that the utilities will not be able to generate the requisite revenue to cover their cost of operation, leading to the phenomenon of “darkness in the tariff,” which may manifest in terms of operational losses and poor service delivery. Other factors that affect the operational cost of utilities include exchange rates. The power purchase agreement is in US dollars, while the utilities bill and receive payments in Ghana cedis (GHS). The PURC uses average economic indicator rates (inflation, exchange rate, gas prices) instead of the prevailing rate. These socio-politico-technical factors have become a discretionary tool for PURC as they are unpredictable. They have become what PURC calls “decision variables” and have continued to cast a slur on the transparency and integrity of PURC, as some stakeholders think that PURC hides some of the variables used for computing its tariffs. This finding corroborates earlier findings that

environmental factors are why regulatory agencies struggle to achieve their goals (Levy & Spiller, 1994).

9.4.6.2 Regulatory Enforcement Challenges

Another challenge highlighted by respondents is the difficulty of enforcing regulatory compliance. According to them, PURC issues penalties such as warnings, orders, fines, and court prosecution in the worst cases. Unfortunately, each of these options has challenges. First, there have been instances where the utilities must comply with regulatory advice and orders, particularly regarding quality of service. Second, while the monetary penalties and sanctions have yielded good compliance results, respondents think they usually need to be more punitive. This is because, first, the officials of the utility companies who cause the problems do not personally bear the cost of the fines, so it usually becomes a cost to the company. Second, the utility may pass on the cost of the fine to consumers during tariff adjustment proposals. PURC may either threaten tariff reduction or refuse tariff increment to elicit good behaviour. However, that tends to reduce their revenues, and they may be unable to cover their operational cost.

Third, though PURC has the powers of the high court, it does not have prosecutorial power. As a result, PURC finds it difficult to punish a utility service provider through court action because the utilities are largely state-owned companies whose lawyer is the Attorney General. Since the attorney general is the state's prosecutor, it would be difficult to get him to prosecute a state-owned organisation that he doubles as its attorney. There has been a case where PURC took court action against GWCL, but instead of prosecution, the attorney general recommended an out-of-court settlement since both institutions are state-owned. Also, ECG was told to go back to PURC to settle non-compliance issues on the Cash waterfall (CWM) with the regulator instead of the penalties, sanctions, or court options—for example, the cash waterfalls mechanism reports for October to December 2023 and January- February 2024.

The commission has validated payments and receipts to all stakeholders along the electricity value chain. The commission notes that, up to date, ECG still needs to comply with the guidelines of the new CWM as directed by the President in August 2023. This defeats the principle of fair and equitable allocation of revenues to sector players under Level B as approved by the CWM Standing Committee, which aligns with the revised CWM guidelines. The commission wishes ECG to cooperate and allow the CWM to function as the President directs. The Ministry of Finance (MoF) should also take the necessary steps to honour its obligations by paying for the shortfalls.

The challenge with regulatory enforcement is that the regulator is often faced with relational regulation. Thus, how does the regulator enforce compliance without soiling the established collaborative walk? In fact, in the United Kingdom, where regulators from the Health and Safety Executive aim to establish such connections with those they regulate, Hawkins, like numerous other scholars, pointed out that there exists “a significant impediment to resorting to prosecution, as formal actions are quickly perceived by those being regulated as an adversarial move, one that significantly disrupts positive relationships” (Hawkins, 2002, p. 128). This is even more challenging if, as in the case of PURC, the regulators are public-owned, and their executives are appointed by the same appointing authority that appointed the members of the regulator's board, including the chair and the executive secretary.

9.4.6.3 Lack of comprehensive laws in the water sector

This study also found that a significant challenge for PURC is that no comprehensive legal and institutional framework governs the water sector. GWCL provides water only in urban areas, so PURC's regulatory activities in the water sector happen only in urban centres. As a result, there are multiple players in the rural water supply value chain, including water tanker operators, borehole drillers and those who sell water dug from boreholes. Unfortunately, the sector is fragmented because no legal and institutional framework exists. Thus, there are

multiple actors in the water sector, but they need to be coordinated appropriately. Again, these players in rural areas are not under PURC's regulation.

Indeed, this was reported by AfDB in its Water Sector Governance report (2008) and recently by Aquaya (2020). Aquaya (2020) particularly noted that while sachet water, now a primary drinking water source for urban residents, falls under the regulation of Ghana's Food and Drug Administration (FDA) and Ghana Standard Authority (GSA), a significant majority of sachet water manufacturers operate without legal registration or monitoring by any institution. Secondly, the provision of water services in schools and healthcare facilities is under the purview of their respective line ministries—the Ministry of Education (MoE) and the Ministry of Health (MoH). Technical agency employees from these ministries are embedded in the Metropolitan, Municipal, and District Assemblies (MMDAs) to oversee water service priorities and enhancements. The Ministry of Sanitation and Water Resources (MSWR) needs more staff representation at the district level to coordinate water needs with health or education staff (Aquaya, 2020).

Thirdly, despite the swift organisational shift in the Community Water and Sanitation Agency (CWSA), policy adjustments still need to catch up. Consequently, there are currently no legal provisions regulating CWSA activities as a utility, and the procedure for settling water disputes between District Assemblies (DAs) and CWSA remains to be determined. Lastly, there needs to be a regulatory body to oversee the activities of MMDAs, ensuring advancements in water supply at the local level. This gap requires critical attention since, as noted by the GWCL (2022), the lack of water governance and, in particular, no regulation in rural areas may have implications for the quality and affordability of water used by rural dwellers.

Ghana could improve its regulatory governance in the electricity and water sectors by tackling these challenges.

9.4.7 Study implications

The implications of this research are manifold. It extends beyond academia to inform policy and practice in regulatory governance. Firstly, it stimulates academic discussion on the imperative of robust institutional frameworks to safeguard regulatory autonomy and integrity. Secondly, it underscores the pivotal role of transparency in fostering stakeholder trust and regulatory compliance. Thirdly, by delineating the challenges faced by PURC, the study paves the way for a study into policy interventions and regulatory reforms to optimise regulatory governance in the electricity and urban water sectors.

The study also has implications for practice encompassing broader discussions on stakeholder engagement, public interest welfare, and governance innovation. The study informs policy deliberations to foster regulatory legitimacy and trust by elucidating the nexus between responsiveness and stakeholder satisfaction. Furthermore, it underscores the importance of proactive regulatory measures and stakeholder inclusivity in navigating the complexities of the modern regulatory landscape. By highlighting the factors influencing PURC's credibility and trustworthiness, it provides actionable recommendations for enhancing regulatory effectiveness and stakeholder confidence.

Moreover, the findings underscore the importance of fostering a positive organisational culture, strengthening stakeholder engagement mechanisms, and fortifying regulatory independence to uphold credibility amidst external pressures. Identifying areas for improvement and offering pragmatic recommendations facilitates enhancing regulatory governance mechanisms, fostering stakeholder confidence, and promoting sustainable development in the utility sectors.

Finally, the study calls for a national dialogue on regulatory governance in the energy sector. Thus, there should be a renewed credible commitment towards unravelling the mystery surrounding the implementation of the Cash Waterfall Mechanism. This will help enhance the

financial autonomy of PURC while also ensuring that independent power producers (IPPs) and other beneficiary institutions are financially capable of enhancing a sustainable generation, transmission and distribution of safe and reliable services to end users. As a result, the study's emphasis on a national dialogue aligns with the principles of public interest, capture, and credible commitment theories, underscoring the importance of diverse perspectives in policy discussions concerning economic, socio-politico-technological factors and tariff-setting processes.

9.4.8 Suggestions for Research

Despite employing public interest, regulatory capture, and credible commitment theories to elucidate the intricate dynamics of legal and institutional design and regulatory governance quality, the specific choice of theories that could explain the informal legal rules and processes that influence the institutional and organisational interactions and processes of PURC within the organisation and collaborations may have influenced the nature of the study's results. Future researchers should consider applying alternative theories of organisations and administration to offer diverse perspectives on partnerships.

The study opens avenues for future research to delve deeper into the motivations behind government interference. Although the current study unravelled political fortunes as one of the drivers, since that was not the focus, it needed to uncover a nuanced understanding of the processes and the nature of interactions that lead to such political motivations.

Perhaps, using public interest theory, future research may examine whether such interventions respond to citizens' plight. Meanwhile, regulatory capture theory could be deployed to explore explanations rooted in private interests. Analysing whether the government's actions align with regulatory capture theories would provide insights into the pursuit of political and other private interests.

Secondly, this study found that PURC may face power-play and manipulation of the regulatory levy. In order to remedy this, the international community, particularly the IMF and World Bank, have been helping to implement an effective transparency measure called the Cash Waterfall Mechanism (CWM). Despite making payment of the regulatory levy a conditionality for the bail-out that the government of Ghana seeks from the IMF, ECG still needs to pay the regulatory levies into the cash waterfall fully. Similarly, the utilities (ECG, NEDCO and GWCL) continue to flout regulatory orders and only sometimes comply with most KPIs related to providing safe, reliable and stable services. Considering this posturing, the current study found that respondents, particularly experts and consumers, think PURC is too lenient for the utilities. From the perspective of regulatory capture, future research may conduct a nuanced investigation into regulatory compliance, including why the utilities continually fail to meet these obligations.

Building upon this research, future studies could delve deeper into the comparative analysis of regulatory governance across different sectors and jurisdictions. Additionally, longitudinal studies tracking the implementation of regulatory reforms and their impact on governance outcomes would offer valuable insights into the evolution of regulatory regimes.

Moreover, future research endeavours could delve deeper into comparative analyses of regulatory responsiveness across different sectors and jurisdictions, offering insights into sector-specific challenges and best practices. Longitudinal studies tracking the evolution of stakeholder engagement strategies and their impact on regulatory outcomes would provide valuable insights into the dynamics of regulatory governance over time. Additionally, exploring the role of emerging technologies and innovative governance mechanisms in enhancing stakeholder participation presents a promising avenue for future inquiry.

Finally, building upon this research, future inquiries could delve deeper into the mechanisms through which regulatory credibility impacts stakeholder behaviour and regulatory outcomes. Additionally, comparative studies across different regulatory contexts and sectors would offer valuable insights into the generalizability of the findings. Furthermore, longitudinal studies tracking the evolution of regulatory credibility and its implications for governance outcomes over time would enrich our understanding of regulatory dynamics in dynamic socio-political environments.

9.5 Conclusion

The interpretation of a thesis conclusion varies across disciplines, but regardless of the specific connotations, a shared element brings consistency to the conclusion of a doctoral dissertation. As Phillips and Pugh (1998) outlined, this common thread is the dissertation's fundamental argument. This argument serves as the essence or central proposition of the dissertation, conveying its underlying philosophy. The subsequent paragraphs summarise the philosophy or thesis encapsulated within this dissertation.

The research has shown that PURC exhibits high managerial, financial, and legal autonomy, indicative of positive steps towards effective regulatory governance. However, challenges arise from political interference stemming from weak structural autonomy. Additionally, concerns surrounding the transparency of tariff-setting methodologies, particularly the non-disclosure of certain variables due to socio-politico-technical considerations, suggest areas for improvement.

PURC's performance in delivering regulatory responsiveness is commendable. Engagement with stakeholders, communication, and timeliness in decision-making processes have been positive aspects of its regulatory activities. However, PURC can continue to enhance its responsiveness by widening the range of stakeholders, particularly in terms of diversity and

coverage. In addition, PURC should adopt more innovative and flexible practices to enhance proactivity and timely response to issues.

The findings reveal a mixed assessment of PURC's regulatory credibility. While it enjoys autonomy from powerful businesses, consistency in policies and actions and autonomy from regulators are issues that need attention. The interference from elected politicians significantly affects the credibility of PURC. PURC should look into models of regulatory credibility from organisations such as the UK's Financial Conduct Authority (FCA) and the United States Securities and Exchange Commission (SEC) for insights on enhancing regulatory credibility. This can be done by enhancing the institutional design of PURC and making it more independent. An earlier study by Ennsner-Jedenastik (2014) reported that a substantial degree of agency independence is a safeguard for executives affiliating with opposition parties, preventing premature dismissal. According to him, institutional responses to credibility pressures curtail the political manipulation of the appointment process, thereby potentially restricting party influence in regulatory politics.

Challenges faced by PURC in its regulatory activities include political interference, threats to financial autonomy due to regulatory levy manipulation, governance structure issues, environmental contexts, and role conflicts with the Energy Commission.

The findings of this study can be understood within the framework of public interest theory, regulatory capture theory (a variant of public choice theory), and the growing literature on the concept of credible commitment. In line with the institutional regulation theory, both the public interest theory and the credibility commitment perspective argue that institutional characteristics such as autonomy, transparency, accountability and clarity of roles and objectives are essential when creating independent regulatory agencies (Stern & Holder, 1999). This study supports the findings of earlier studies that the nature of institutional design and the

specific institutional endowment of a country significantly impact the quality of regulatory governance (Levy & Spiller, 1994).

Taking insights from the credible commitment literature, due to trust issues that usually arise from information asymmetry in the principal-agency relationship, governments would have considered their executive bureaucracies more appealing than IRAs. Surprisingly, governments across the globe usually opt to set up regulatory agencies independent from the central government to give a credible commitment that the government will not interfere arbitrarily in the regulatory process to ensure that the regulatory entities make some profits while also attracting investment. Because occasions are bound to arise where the government will stand to gain from changes to the regulated sector, for example, by reducing tariffs before an election or to stem inflation, investors require safeguards that these opportunities will not be acted upon.

These safeguards can take the form of the institutional endowment of the country, such as an independent judiciary and a divided government (Levy & Spiller, 1994; Spiller & Volgelsang, 1997). They can also exist in the way the regulatory agency is designed. Thus, by appropriately designing the agency's framework to give it autonomy, the government can reduce the scope for government opportunism and thus reassure investors. This can be done by formulating specific rules that safeguard the agency against interferences in the agency's budget, the process of nomination and substitution of regulators, requirements for making different types of decisions, etc.

Suppose the design is to provide a credible commitment on the part of the government, in that case, it must provide binding constraints; therefore, these cannot be superficial features but rather concern fundamental characteristics of the agencies. This implies that, in countries where credibility is an essential concern for the government, we can explain much of the choice of regulatory institutions to provide this commitment. In the current study, it has been found that

the government of Ghana has made significant legislation to make PURC financially autonomous while shielding it from political interference. Unfortunately, the government's commitment has not been enough since the institutional design of PURC needs to consider more safety guards against political interference. As a result, PURC suffers political interference despite the legislation.

Overall, this study's findings shed light on critical aspects of regulatory governance while significantly contributing to political economy, leadership, and public administration. Thus, the study has offered insights into the intricate dynamics within the Public Utilities Regulatory Commission (PURC) in Ghana's water and electricity sectors. The exploration of socio-politico-technical considerations, particularly concerning the darkness-in-the-tariff issue, enriches our comprehension of how local contexts impact the quality of regulatory governance, influencing autonomy and transparency.

The study raises significant questions about the reasons behind government interference in regulatory activities. Drawing on insights from Silva's work in the Brazilian context, two main incentives for presidential intervention are identified: the imperative to implement popular policies and the desire to avoid conflicts between regulatory policies and broader macroeconomic and social policies managed by the government. This hints at the inherent tension between electoral accountability and regulatory independence.

9.6 Recommendations

Based on the study's findings and conclusions, several recommendations are made to enhance the quality of regulatory governance within the electricity and urban water sectors in Ghana:

Enhanced Structural Autonomy: Strengthen institutional safeguards to insulate PURC from political interference, ensuring robust structural autonomy and regulatory independence. Thus, policymakers should consider legislative and institutional reforms and safeguard mechanisms

to enhance PURC's structural autonomy and minimise political interference. Most importantly, the appointment procedure should be reviewed as follows:

- i. Some board members could be appointed while others could be made permanent to correct transitional gaps. That would ensure that at least a board is in place when there is a change of government.
- ii. The members of the board should appoint the board chairperson from among themselves.
- iii. The criteria for appointment and the specific qualifications and competencies requirements should be clearly defined and stated in the Act.
- iv. To enhance tenure security, the tenure of office of the board, including the Executive Secretary, should be defined and must be a fixed number of years.
- v. The remuneration of the board should not be determined by the President but by parliament.
- vi. Additionally, measures should be implemented to protect financial autonomy and insulate the regulatory levy from manipulation by regulated utilities. It is a good thing that the international community is currently helping to implement and improve the cash waterfall; however, rather than viewing it as mere obedience to conditionalities for financial support from the IMF, the government of Ghana should demonstrate credible commitment towards helping PURC to implement the transparency measures proposed by IMF and the World bank. The government should support PURC to ensure that utility providers, mainly ECG, comply with regulatory orders while demonstrating renewed commitment towards implementing the Cash Waterfall Mechanism effectively.

Second, to PURC, the following recommendations are made:

Transparency Enhancement: Address non-disclosure issues in tariff calculation models through increased transparency measures, including disclosing relevant variables and their impact on tariff determinations. Disclosing critical variables while maintaining sensitivity to socio-politico-technical factors can improve stakeholder trust.

Improved Responsiveness: Enhance PURC's visibility by proactively addressing stakeholder concerns and ensuring utilities compliance with regulatory directives by the commission. This will help to reduce the burden stakeholders go through to launch complaints. Furthermore, PURC should improve responsiveness by expanding stakeholder consultations, diversifying representation, and allocating adequate resources to facilitate effective stakeholder engagement. Moreover, despite the difficulty in balancing stakeholders' interests, PURC should demonstrate renewed commitments towards factoring the concerns of stakeholders into the decision-making processes. Specifically, PURC should take proactive measures in its regulatory actions while ensuring that the final decisions made regarding tariffs after consultations are communicated to relevant stakeholders before announcing the final decisions. By doing these, PURC will be able to incorporate more adaptable, collaborative, and inclusive governance approaches in the electricity and urban water sectors.

Credibility Assurance: Mitigate bias and political influence perceptions by ensuring consistency and predictability in administrative practices and tariff review schedules. Also, the PURC can foster stakeholder trust through transparent decision-making processes and equitable representation of stakeholders' interests.

By heeding these recommendations and learning from the experiences of international regulatory bodies, Ghana can bolster the effectiveness of its regulatory governance, ultimately

benefiting both consumers and industry stakeholders. This endeavour will contribute to the broader discourse on regulatory governance in emerging economies.



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APPENDIX I

QUALITATIVE DATA COLLECTION INSTRUMENT

INTERVIEW GUIDE

**QUALITY OF REGULATORY GOVERNANCE IN GHANA: AN ANALYSIS OF
THE PUBLIC UTILITIES REGULATORY COMMISSION (PURC) IN THE
ELECTRICITY AND URBAN WATER SECTORS**

INTRODUCTION

This interview guide aims to collect data to assess the effectiveness of PURC's regulatory governance in the electricity and urban water sectors. The purpose of the study is to explore how stakeholders perceive the PURC in terms of its regulatory responsiveness and credibility, as well as the challenges that the PURC faces in its regulatory activities. The study is part of the requirement for the Ph.D. degree in Public Administration at the University of Ghana. In this regard, the study seeks your honest opinion. Please be assured that your identity will be kept confidential and your personal information will not be used. In addition, the answers you provide in the interview will be used strictly for academic purposes only.

Please accept the invitation to take part in this academic exercise. Yes/No [.....]

INTERVIEWS IN THE.....SECTOR

Socio-Demographic characteristics

- i. Where do you work? (Please add city/town and region
.....)
- ii. Number of years of experience in your organisation.....
- iii. Position/Role/Rank.....
- iv. Highest Educational level.....

What category of stakeholder do you belong to? Please indicate by underlining the relevant one(s)

PURC official of ECG Official of GWCL Official of NEDco Government Official

Civil Society Organisation/Trade Unions Consumer (Individual or organisation)

Other (please

specify.....)

1. Quality of Regulatory Governance

a. Autonomy

- 1. Do you think PURC's current legal and institutional design gives it enough independence to operate effectively? Please explain this regarding financing, appointment procedures, legal backing, and managerial authority.

b. Transparency

- 2. What formal structures/processes are in place to ensure that PURC operates transparently?
- 3. In your view, is PURC operating transparently? How do they do that?

4. How would you describe the visibility of PURC in terms of public awareness of their roles and activities in electricity and urban areas?

II. Regulatory responsiveness

a. Flexibility

5. What are some of the mechanisms in place to make PURC innovative or adaptive to changing circumstances? Please explain.
6. How does PURC's regulatory process allow for innovative or alternative compliance pathways for its regulatees? For example, it emphasises outcome-based measures rather than prescriptive rules.

b. Stakeholder engagement

7. Does the PURC have procedures and mechanisms to consult widely? What are these procedures? And who are the key stakeholders usually engaged? How often in a year?
8. Is there any evidence that public participation and consultation processes influence the decisions or operations of the PURC? Please describe some of this evidence to me.

c. Communication

9. Do you think PURC provides enough options to allow communication between them and its stakeholders? What are some of the mediums of communication available to stakeholders? (e.g., meetings, emails, phone calls, and public hearings)
10. Is there any evidence of the effectiveness of PURC's communication processes? Please explain.

d. Timeliness

11. Are there any set deadlines for PURC to respond to stakeholder complaints or requests? Please explain: a. responding to complaints from stakeholders b. processing and issuance of licenses and permits c. other

12. Are there any patterns or trends in the types of regulatory deadlines that are missed?

Please explain

III. Regulatory Credibility

13. To what extent do you perceive PURC's regulatory activities credible? Please explain in terms of:

- a. Autonomy from elected politicians
- b. Time-consistencies in decisions and policies
- c. autonomy from regulatees
- d. Autonomy from powerful businesses and interest groups
- e. Stakeholder trust

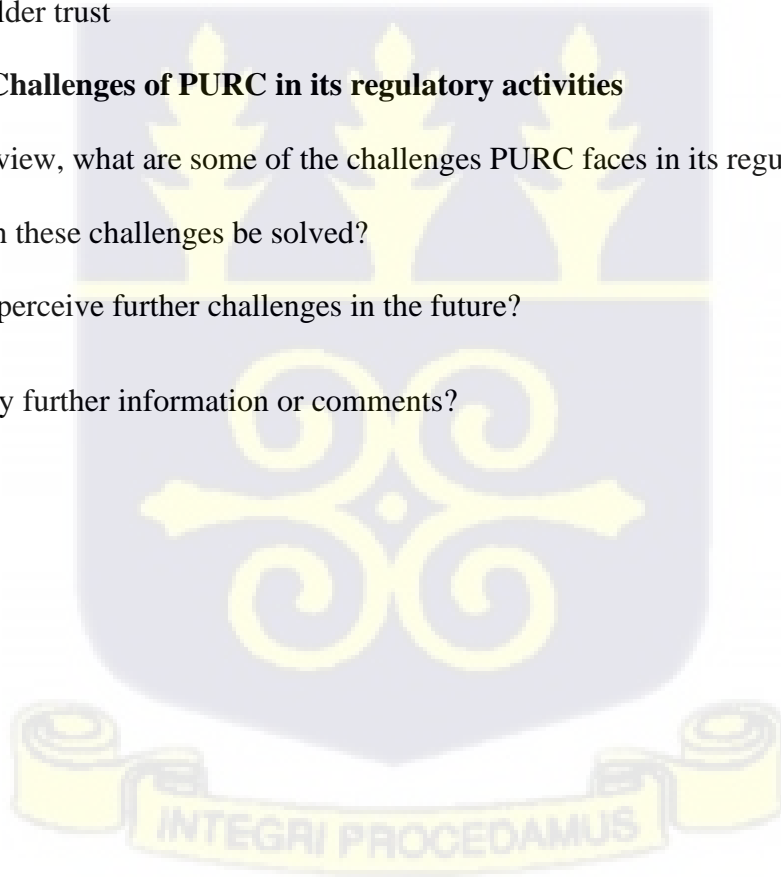
IV. B. Challenges of PURC in its regulatory activities

14. In your view, what are some of the challenges PURC faces in its regulatory activities?

15. How can these challenges be solved?

16. Do you perceive further challenges in the future?

Do you have any further information or comments?



APPENDIX II

FOCUS GROUP DISCUSSION

Focus Group Discussions

- I. WELCOME AND PURPOSE OF GATHERING – REGIONAL MANAGER, PURC.
- II. BACKGROUND OF DISCUSSION – RESEARCHER
- III. DISCUSSION – FACILITATED BY RESEARCHER

A. Item 1: Autonomy of PURC

1. Do you find PURC autonomous in its operations in the Region? Consider legal backing, financial autonomy and Managerial autonomy

B. Indicator Two: Transparency of PURC

2. In your observation, do you think PURC is operating transparently in the region?
3. Do you feel PURC consults you well enough in its major decisions affecting you as a water and electricity industry stakeholder?
4. PURC has implemented many innovative measures, including Radio programmes, visits to churches/mosques, SHS, Chiefs, etc.). In your view, do you feel these activities have had a significant impact in terms of their visibility, stakeholder engagement, and awareness in the region?

C. Indicator Three: Responsiveness

PURC has deployed many innovative mechanisms to make it responsive to its stakeholders and improve its regulatory efficiency. (e.g., Consumer Day activities, Traditional Day activities, Assembly Activities, Regulatory school, Religious Day, Every Consumer Deserves PURC, Media and Virtual activities)

5. How have these activities impacted your operations as a stakeholder? Can you give specific examples?

D. Indicator Four: Credibility

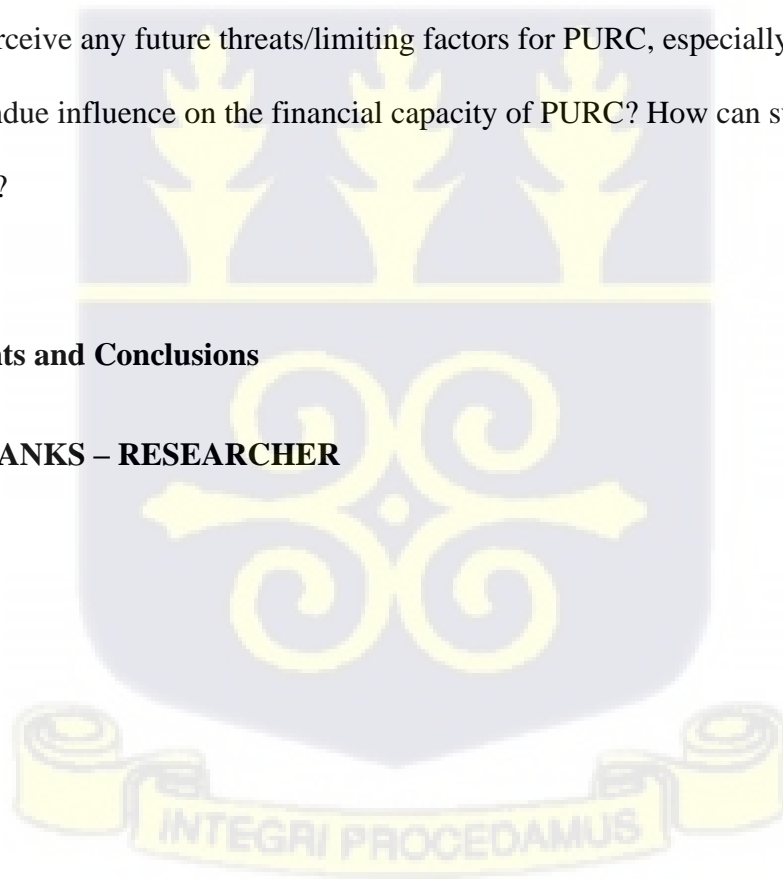
6. Do you think PURC is autonomous from elected Politicians?
7. Do you think PURC has been time-consistent in their policies and actions?
8. Do you think they have been captured by any utilities or powerful interest groups, businesses and consumers?

E. Indicator Five: Challenges of PURC

9. What challenges have you observed about PURC which need remedy? How can they be addressed?
10. Do you perceive any future threats/limiting factors for PURC, especially regarding the utilities' undue influence on the financial capacity of PURC? How can such a possibility be averted?

Final Comments and Conclusions

VOTE OF THANKS – RESEARCHER



APPENDIX III

LETTERS OF APPRECIATION FROM STAKEHOLDERS TO PURC

Honorable M. Abass Alhassan
Assembly Member-Dalun

The Regional Manager
PURC-Tamale.

November 12, 2023

Dear Sir,

LETTER OF APPRECIATION

I wish to write on behalf of the residents of Dalun for the Commission's swiftness in ensuring that NEDCo restores power to the community.

As we indicated during the settlement meeting, we will not allow any residents of the community to interfere with the networks of NEDCo henceforth.



Thank you.





KUMASI HIGH SCHOOL
Ghana Education Service

P. O. Box 1247, Kumasi - Ghana
Tel: 03220 28886/ 91780
Web: www.kumasihigh.unilinq.com

KHS/21/Vol.8/
OUR REF:

16th March, 2023.
DATE:/...../.....

The Regional Director
P. U. R. C. (Ashanti)
P. O. Box 1001
KNUST, Kumasi.

P. O. Box 1247, Kumasi - Ghana
Tel: 03220 28886/ 91780
Web: www.kumasihigh.unilinq.com

Dear Sir,

LETTER OF APPRECIATION

On behalf of the School Board, Management and Staff, the Past and the current crop of students of Kumasi High School, I write to you to express our profound gratitude to the Commission for organizing a sensitization forum for our students and some staff members on our school premises yesterday.

Sir, the exciting forum, no doubt, has gone a long way to deepen our understanding of the role and activities of your cherished organization.

The gift of a number of the Commission's souvenirs is also hugely appreciated.

Once again, we say, "Thank you".

Yours faithfully,

BERNARD HALL BAIDOO
[HEADMASTER]



Ccs.: The Assistant Head (Administration)
The Assistant Head (Academic)
The Assistant Head. (Domestic)
The Senior House-master
The Two (2) Counsellors

INTEGRI PROCEDAMUS



THE METHODIST CHURCH GHANA

MAAKRO CIRCUIT



BANKERS

Prudential Bank Ltd.
Suame - Maakro
Multi Credit Savings & Loans Ltd.
Maakro

SUPT. MINISTER

Very Rev. Okontomene Mensah Bonsu (+233 244796682)

CIRCUIT STEWARD

Felix Ayisi (+233 244 985350 / 0205184940)

ADDRESS

P. O. Box SE 104
Suame - Kumasi
West Africa - Ghana
Tel: +233-03220-45624

Our Ref.: Your Ref.: Date: 20/03/2020

THE REGIONAL MANAGER

PURC

KUMASI.

PUBLIC UTILITIES REGULATORY
COMMISSION - KUMASI
RECEIVED
DATE: 20-3-2020

Dear Manager,

RELOCATION OF TRANSFORMER

This is to inform your good office that the ECG has relocated the transformer. They started last Friday 13th March, 2020 by removing the transformer and yesterday, 19th March, the service line was also removed.

I am by this letter thanking you sincerely for a good work done.

May God richly bless you.

Yours faithfully,


V/Rev. Okontomene Mensah Bonsu

(Supt. Minister)

Cc:

The Regional Manager

Electricity Company of Ghana

INTEGRI PROCEDAMUS

Angelina Appafram

Fawoade – Kumasi.

13th January, 2020.

The Regional Manager
Public Utilities Regulatory Commission
P. O. Box CT 3095
Cantonments – Accra.

PUBLIC UTILITIES REGULATORY
COMMISSION – KUMASI
RECEIVED
DATE 13/01/2020

Dear Sir,

LETTER OF THANKSGIVING

I Angelina Appafram humbly write this letter to you to say a big thanks to you for the good work you did for me.

I came to inform you about the huge Electricity bill which has been giving to me to pay and through you all these huge amount has been cancelled.

I really appreciate what you have done for me. May the good Lord richly bless you all.

Thank you.

Yours faithfully,



Angelina Appafram

0244509944



Mr. Basit Razak
Tishegu- Tamale

The Regional Director
PURC - Tamale.

June 26, 2023

Dear Sir,

LETTER OF APPRECIATION TO PURC

Sir, I want to thank PURC and the officers of the region for resolving my complaint I have with Ghana Water Company Limited.

I must mention that if all public institutions will work like the PURC, we should not have many problems in this country.

May Almighty Allah bless you.


Thank you.



info@purc.com.gh

From: Asimeng Sarkodie <asimengadusarkodie@gmail.com>
Sent: Tuesday, May 23, 2023 12:02 PM
To: info@purc.com.gh
Subject: Appreciation for work done



Dear Sir/ Madam,

I am writing this letter to say a very Big Thank you to Mrs. Joycelyn Hudson for her excellent performance in leading and aiding the removal of the electricity pole from my portion of land at Kosoa. I feel honored Ghana has a reputable institution like PURC (Cape Coast) with Mrs. Joycelyn Hudson as one of the employees. Mrs Joycelyn Hudson, whose sincerity, discipline, readiness, selfless and dedication to work has enabled me reclaim my land. I appreciate the eagerness, dedication and professionalism that she showed in her duty to work. This has also inspired me to perform my duty well at my department at Korle Bu Teaching Hospital. I always thought in Ghana, one has to pay bribe or tips for a work to be done but she and her team have proven me wrong. I am very proud of her. I wish her the very best in her future endeavors.

Thank you and best regards

Yours Sincerely,

Asimeng Adu Sarkodie
Chief Radiochemist / Nuclear Medicine Technologist
National Radiotherapy Oncology and Nuclear Medicine Centre
Korle Bu Teaching Hospital



APPENDIX IV

REGULATORY TRANSPARENCY THROUGH TECHNOLOGY

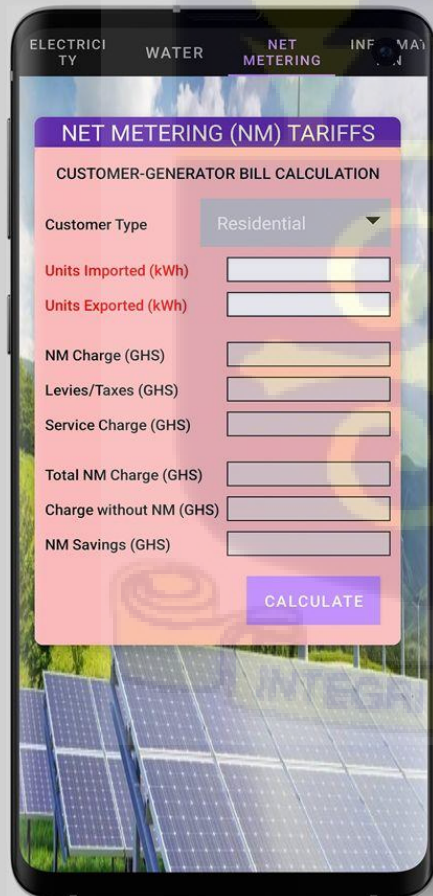


**PUBLIC UTILITIES REGULATORY COMMISSION
(PURC)**

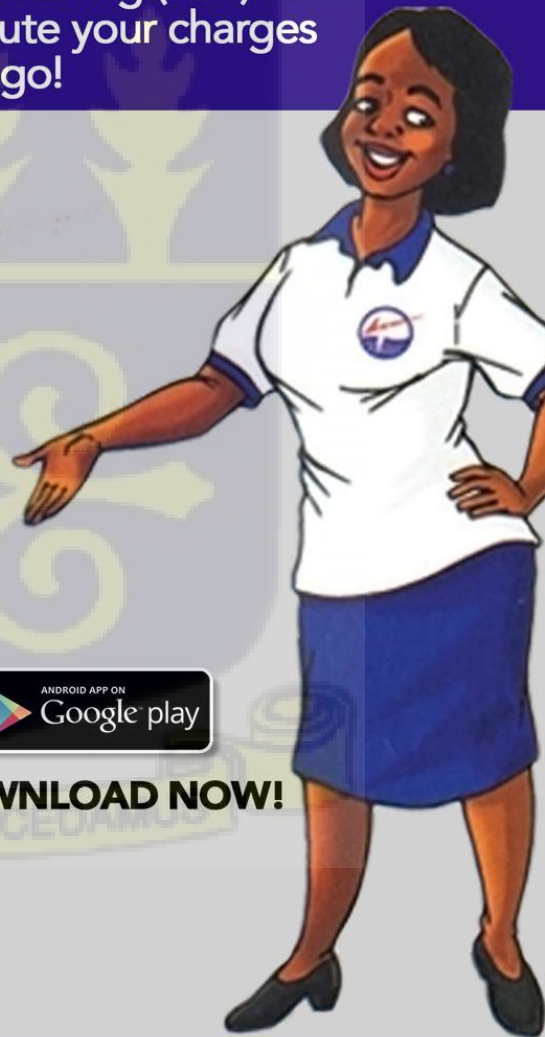
"PURC TARIFF RECKONER"

Mobile App

Access the new Net Metering (NM) Tariff Reckoner and compute your charges on the go!



DOWNLOAD NOW!





PUBLIC UTILITIES REGULATORY COMMISSION (PURC)

"PURC TARIFF RECKONER"

Mobile App

Calculate the Amount to Pay for Your
Electricity & Water Consumption on the Go!

ELECTRICITY TARIFFS

Consumption (kWh) ----> Total Amount (GHS)

Customer Type: Residential

Preference: Consumption (kWh)

Consumption (kWh):

Energy Charge (GHS):

Levies/Taxes (GHS):

Service Charge (GHS):

Total Amount (GHS):

CALCULATE

WATER TARIFFS

Consumption (m3) ----> Total Amount (GHS)

Customer Type: Residential

Preference: Consumption (m3)

Consumption (m3):

Water Charge (GHS):

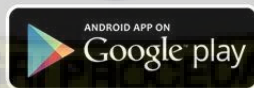
Levies (GHS):

Service Charge (GHS):

Total Amount (GHS):

CALCULATE

DOWNLOAD NOW!







PUBLIC UTILITIES REGULATORY COMMISSION (PURC)

"ELECTRICITY CONSUMPTION ESTIMATOR"

Estimates your monthly electricity consumption both in kWh and in GHS using the PURC Gazetted Tariffs



Customer Type:	Residential	▼
Diversity Factor (%):	100%	▼ <input type="checkbox"/> Apply
Monthly Electricity Consumption (kWh):	0.6	
Monthly Cost of Electricity (GHS):	2.54	
<input type="button" value="View Chart (kWh)"/>		<input type="button" value="View Chart (GHS)"/>
<input type="button" value="CLEAR"/>		

	
LED Bulb	Iron
1 ▼ <input type="button" value="ON"/>	1 ▼ <input type="button" value="OFF"/>
Appliance Rating (W): 10	Appliance Rating (W): 1200
Duration of use (h): 2 hours a day ▼	Duration of use: 1 hour a week ▼

Visit our website or the link below to access the application
www.purcghapp.com/tariffCalc.aspx



UNIVERSITY OF GHANA
ETHICS COMMITTEE FOR THE HUMANITIES (ECH)

P. O. Box LG 74, Legon, Accra, Ghana

My Ref. No: ECH.220/22-23

July 31, 2023

Tia Abdulai Robert Aziz
Dept. of Public Administration & Health Services Management
University of Ghana
Legon

ETHICAL CLEARANCE
(ECH 220/ 22-23)

The Ethics Committee for the Humanities (ECH) conducted a full board review and approved your protocol titled:

QUALITY OF REGULATORY GOVERNANCE IN GHANA: AN ANALYSIS OF THE PUBLIC UTILITIES REGULATORY COMMISSION IN THE ELECTRICITY AND URBAN WATER SECTORS

PRINCIPAL INVESTIGATOR: TIA ABDULAI ROBERT AZIZ

Please note that the final review report must be submitted to the Committee at the completion of the study. Your research records may be audited at any time during or after the implementation. Any modification of this research project must be submitted to ECH for review and approval prior to implementation.

Please report all serious adverse events related to this study to ECH within seven (7) days verbally and in writing within fourteen (14) days.

This certificate is valid until July 30, 2024. You are required to submit annual reports for continuing review.

Please accept my congratulations.

Yours Sincerely,

Professor C. Charles Mate-Kole
ECH Chair

Cc: Prof. Albert Ahenkan, Dept. of Public Administration and Health Services Management, UG
Dr. James Kwame Mensah, Dept. of Public Administration and Health Services Management, UG
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