CORPORATE CULTURE, INNOVATION PRACTICE, REGULATORY FRAMEWORK AND PERFORMANCE OF COMMERCIAL STATE CORPORATIONS IN KENYA

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A RESEARCH THESIS SUBMITTED TO THE SCHOOL OF MANAGEMENT AND LEADERSHIP IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF DOCTOR OF PHILOSOPHY IN MANAGEMENT AND LEADERSHIP OF THE MANAGEMENT UNIVERSITY OF AFRICA

OCTOBER 2025

DECLARATION

I declare that this research thesis is my original work and has not previously in its entirety or in part been presented for a degree or other academic work.

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ACKNOWLEDGEMENT

I am deeply grateful to my supervisors, Prof. Peter Kithae and Dr. James Reuben, for their invaluable guidance, time, and encouragement throughout the process of writing this thesis. I sincerely appreciate my parents, Dr. Michael K. Cheruiyot and Mrs. Borness C. Cheruiyot, for their unwavering support and motivation during this journey. My gratitude also extends to the management and staff of State Corporations for their assistance in providing crucial data for this study. Additionally, I wish to thank my beloved sons, Ryan Kimutai and Ramcey Kibet, as well as my siblings, for their selfless support and understanding, which allowed me the time and focus needed to complete this thesis.

DEDICATION

This thesis is dedicated To My family for their unwavering support during this journey.

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ACRONYMS AND ABBREVIATIONS

FY	Fiscal Year
CEO	Chief Executive Officer
CVF	Competing Values Framework
GDP	Gross Domestic Product
ICT	Information Communication Technology
ROA	Return on Assets
ROI	Return on Investment
SC	State Corporation
SOE	State-Owned Enterprises
SPSS	Statistical Package for Social Sciences

OPERATIONAL DEFINITION OF TERMS

Corporate Culture	Corporate culture can be described as the collective values, assumptions, and behavioral patterns that guide how members of an organization perceive situations, interact, and carry out their duties.
Innovation Practice	Innovation practice is the systematic adoption and application of new products, processes, organizational or marketing methods to improve outputs.
Culture	Culture is the 'way' people behave and make decisions; innovation practice is the 'actions/outputs' (new products/processes) that may result from that culture.
Performance	"An institution's ability to achieve its objectives effectively and efficiently by utilizing available resources." "Typically, four key outcomes are assessed: financial performance, learning and growth, internal business operations, and shareholder value performance."
Regulatory Framework	Refers to the "set of rules, procedures, and practices governing the regulation of State Corporations in Kenya."
State Corporation	It is a legal entity established within the provision of State Corporations Act chapter 446 of the laws of Kenya to undertake commercial, financial, non-financial or service or any other activities on behalf of government of Kenya.

ABSTRACT

In Kenya, "commercial state corporations play a pivotal role in the country's socio-economic development, with the government leveraging them to transform Kenya into a newly industrializing, middle-income country providing a high quality of life to all its citizens by 2030 in a clean and secure environment." Even before the COVID-19 pandemic, these corporations were experiencing declining overall performance, evident in lower profitability indicators such as return on equity, return on assets, and net profit margins. This study aimed to examine, "the effects of corporate culture, innovation practice, and regulatory framework on the performance of commercial state corporations in Kenya." "The research was guided by four specific objectives: to assess the relationship between corporate culture and performance; to investigate the mediating role of innovation practice in the relationship between corporate culture and performance; to evaluate the moderating effect of the regulatory framework on the relationship between corporate culture and performance; and to determine the moderated mediation effect of regulatory framework and innovation practice on the relationship between corporate culture and performance." The study was grounded in the Denison cultural model and supported by three theoretical frameworks; Diffusion of Innovation Theory, the New Public Management theory and Shareholders Theory. The study adopted positivism research philosophy. The target population for this study were all thirty two (32) commercial state corporations in Kenya as of 30th June 2023 (State Corporations Advisory Committee, 2023) which was the latest data published state corporations advisory committee then. The study adopted a census to meets its objectives. The unit of observation in this study was one hundred and ninety two (192) respondents where primary data was sourced through a questionnaire from six respondents who are top managers at the Kenya commercial state corporations. Quantitative data was analyzed using descriptive and inferential statistics which included correlation and multiple regressions. The study revealed that corporate culture significantly influenced the performance of commercial state corporations in Kenya, accounting for 45% of the variation in performance outcomes (R-squared = 0.450). Additionally, the combined effect of corporate culture and innovation practices was found to explain 65.2% of the variance in performance (R = 0.807, R-squared = 0.652). Innovation practices were identified as a partial mediator in the relationship between corporate culture and performance, as evidenced by a reduction in the coefficient from ß = 0.699 to ß = 0.298 when innovation practices were introduced. Furthermore, the regulatory framework was shown to moderate this relationship, with an R-squared change of 0.020 and a significant F-change statistic (10.897, p = 0.001), enhancing the impact of corporate culture on performance. The study also confirmed a significant moderated mediation effect, where both the regulatory framework and innovation practices jointly influenced the relationship between corporate culture and organizational performance. The study recommends that commercial state corporations in Kenya incorporate corporate culture development into their strategic planning and performance management processes, emphasizing shared values, employee engagement, and alignment with organizational goals. Leveraging technology is also advised to help align corporate culture with regulatory requirements, promoting innovation, accountability, and enhanced performance. Additionally, policymakers are urged to design regulatory frameworks that balance oversight with flexibility, fostering innovation while maintaining accountability by reducing unnecessary bureaucratic constraints.

CHAPTER ONE
INTRODUCTION

1.0 Introduction

The chapter discusses the essential elements: innovation practices, corporate culture, regulatory framework, and organizational performance. It indicates the study's primary focus. It defines the problem statement and the forces behind the research. It presents the objectives, including the rationale, scope, limitations, and delimitations. It ends with a concise summary of the chapter..

1.1 Background of the Study

The effectiveness of organizational performance is now widely associated with elements like corporate culture, innovation activities, and the prevailing regulatory structures. Across both public and private sectors, a robust corporate culture promotes innovation, adaptability, and lasting competitiveness, whereas a weak or inconsistent culture often results in inefficiency and undesirable results. (Denison et al., 2012; Hayes, 2022). A robust corporate culture promotes innovation, adaptability, and lasting competitiveness, whereas a weak or inconsistent culture often results in inefficiency and undesirable results (Ghosh & Srivastava, 2023; Zhang & Li, 2025). Likewise, regulatory systems influence how organizations operate by establishing guidelines, promoting accountability, and minimizing risks related to agency conflicts. (Northouse, 2021; Mensah & Boateng, 2024).

Across Africa, state-owned enterprises play a pivotal role in socio-economic growth, especially in areas like energy, transport, agriculture, and financial services. Despite their importance, these entities frequently face inefficiencies, governance weaknesses, and restricted innovation, often linked to misalignment between leadership, culture, and regulatory control (Omondi & Waiganjo, 2023; Mensah & Boateng, 2024). Regulatory contexts have sometimes enabled reform and modernization, but in other instances have fostered stagnation due to bureaucracy, corruption, and political involvement (Ghosh & Srivastava, 2023). These realities underscore the importance of examining how culture, innovation, and regulation intersect to shape organizational outcomes.

Commercial state corporations in Kenya hold a key position in national development, playing major roles in job creation, infrastructure expansion, and public service provision. Nevertheless, many still attract criticism for inefficiency, inadequate innovation, and fragile governance, even as they function within bold national blueprints like Vision 2030 and the Big Four Agenda (Kimani & Omondi, 2022; State Corporations Advisory Committee, 2023). The interaction of corporate culture, innovation practices, and regulatory frameworks is therefore crucial in explaining performance outcomes. This study aims to “examine these dynamics by exploring corporate culture as the independent variable, organizational performance as the dependent variable, innovation practice as a mediating variable, and the regulatory framework as a moderating variable”.

Entities in sectors such as services, energy, finance, electronics, and agriculture face increasingly complex and volatile conditions driven by deregulation, technological change, global competition, and unpredictable markets. This has not spared state corporations (Imamov & Semenikhina, 2021). In addition, the fierce competition in the market economy and the influence of globalisation are compelling organisations to continuously seek out novel ideas and enhance their capacity for originality and flexibility in order to endure and progress ((Naradda, et al., 2020). Besides, the fierce competition of the market economy and globalization trends are forcing businesses to constantly explore new things and boost creativity and adaptability to changes in order to survive and develop (Tien, Ngoc & Anh, 2021). This entails organizations developing and sustaining culture-specific practices that enhance capabilities and encourage the contribution of all members to achieve the organization’s overall goals, referred to as Corporate Culture (CC).

Development of a particular culture for the organisation is key to the success of these organisations (Low, Abdul-Rahman & Zakaria, 2020). This consists of fostering attitudes of flexibility, dynamism and responsiveness; seeking structures and cultures that are positive and organic; and developing the human resource to its maximum capacity (Juangbhanich, 2020).

Many scholars agree that corporate culture represents both a management philosophy and an approach for enhancing organizational effectiveness and performance. In today's business environment, corporate culture is used as a powerful tool to quantify the way a business functions ((Mbirira, Oseno, & Wanjere, 2023). "Research has confirmed that corporate culture is able to influence the thoughts, feelings, interactions, and organizational performance. Generally, lack of attention to organizational culture, individual beliefs and values lead to absolute failure of organization and achievement of goals, create many operational problems and waste a lot of energy to solve problems (Salarzahi, 2014)." Revitalizing and restructuring the performance of commercial State Corporations remains a critical research area that demands immediate attention. The future of these entities is uncertain since they confront major challenges including political interference, inadequate human resources, misalignment between institutional goals and personal interests, weak quality management systems, and other managerial deficiencies (Mbirira, Oseno, & Wanjere, 2023). In most countries, "SCs are under pressure to deliver better public services and quality goods." Enhancing public sector outcomes and service delivery in any nation calls for a comprehensive grasp of human resource attributes, corporate culture, and the functioning of public institutions.

According to Groysberg et al., (2018), Leadership goes hand-in-hand with strategy formation, and most leaders understand the fundamentals. Culture, however, is a more elusive lever, because much of it is anchored in unspoken behaviors, mindsets, and social patterns (Groysberg et al., 2018). For better and worse, culture and leadership are inextricably linked. Culture is the tacit social order of an organization: It shapes attitudes and behaviours in wide-ranging and durable ways. Cultural norms define what is encouraged, discouraged, accepted, or rejected within a group. When properly aligned with personal values, drives, and needs, culture can unleash tremendous amounts of energy toward a shared purpose and foster an organization's capacity to thrive (Nikpour, 2017).

State corporations provide essential services to both industries and citizens. When effectively managed, they support socio-economic development, generate significant revenue for the state, and function as vital channels for executing government policies. However, when poorly managed, they can impose substantial financial strains and political costs. As a result, the public is often interested in how SCs perform. For government authorities, ensuring optimal performance of state corporations is a top priority. Corporate culture stands out as a critical determinant of performance within state corporations. Studies on State corporations' performance show that a strong corporate culture translates into better results, while weak corporate culture is often at the root of many of the performance problems typically associated with state ownership (Mansi, 2021). Corporate culture can be viewed as the unique pattern of shared values, attitudes, rituals, beliefs, norms, expectations, socialization, and assumptions of employees in the organization (Meduoye, & Meduoye, 2019). Corporate culture is frequently likened to an organization's personality, reflecting employee behavior even without explicit instructions, indicating that it significantly shapes organizational behavior, particularly regarding efficiency, effectiveness, and commitment. This implies that cultivating a suitable corporate culture can lead organizations toward success.

Theoretical evidence suggests a correlation between organisational culture and organisational performance (Zheng, Yang & McLean, 2010). Empirical evidence has been found to support the link between organisational culture and performance (Duke II & Edet, 2012). Additional research has shown that when individuals adhere to shared norms and values within their respective organisations, there is a positive impact on their individual performance as well as the overall performance of the organisation. The link between organisational culture and organisational success or failure has been established via empirical observation (Nikpour, 2017). Organisational shortcomings are often attributed to it, although at times, it is commended for fostering beneficial attributes (Shani & Lau, 2008). Hence, comprehending the implications of organisational culture is an essential responsibility for leaders due to its significant influence on several aspects of organisational operations and outcomes. Neglecting to consider the organisational culture when devising strategies for implementing changes inside an organisation might result in unanticipated and adverse outcomes (Cameron & Quinn, 2011).

Scholars are increasingly studying how organisational culture affects performance. Early quantitative research on culture and performance was by Denison (1984). Data from 34 US companies over five years was utilised in the research. The researcher studied these firms' organisational culture and performance over time. Organisational culture motivated employees who shared a set of fundamental principles, perspectives, and assumptions, helping Japanese firms outperform American firms in economic performance (Denison, 1984). In China, Garg and Ma (2005) examined how cultural differences affect the performance of foreign-owned, joint venture, and Chinese-owned and operated firms. There were significant disparities in culture and performance across the three organisational types. Comparative study shows that "foreign-owned and operated firms outperform joint venture entities and Chinese-owned and governed organisations." The authors attributed this to "cooperation, responsibility, and an efficient management style that emphasised individuals." They also observed that promoting certainty and stability decreased power structure variance, whereas a very masculine approach encouraged forceful management. In contrast, Chinese-owned and controlled firms tend to use authoritarian management styles that undermine collaboration. This was predicted to cause senior management and employee communication to be inconsistent and ambiguous about the management strategy. Significantly, what we know about the nature of leadership in work organisations emanates mostly from research from the western world, while there is a paucity of similar studies from developing countries in Sub-Saharan Africa, where institutional and cultural systems differ from the West.

The performance of firms in Africa is influenced by the African setting in a way that differs from other contexts, notably the Western context (Michalopoulos & Papaioannou, 2013). In her study, Beatrice (2014) examined how organisational culture affects public health organisation performance at the Ocean Road Cancer Institute in Tanzania. The study found that task organisation characteristics such encouraging employee decision-making, giving clear roles and duties, and offering interesting and challenging work improved organisational performance. Kamugisha (2013) examined change management in an organisational environment at the National University of Rwanda. Specifically, this study examined how change management affects the National University of Rwanda's organisational culture. The study's themes—change management and its effects on organisational structure, culture, and leadership—were used to synthesise survey and secondary data. The study found that the institution's management faced strong pushback from staff due to the University's organisational culture. The studies also showed that cultural issues hindered organisational performance by hindering performance contracting implementation in the institution. Broadly, "culture" is perceived as socially and generationally transferred. It consists of the customary, value-related, traditional, religious and behavioural patterns of a particular set of people and is known as the essential root of behaviour and it forms the components of social order (Bulley et al., 2017). For instance, the culture in West African regions (Ghana, Cameroun, Liberia, Benin, Nigeria, etc.) is often described as less egalitarian, more religious, and more collectivist (Ferguson et al., 2008).

In Kenya, "the delivery of public services is still marked by a culture that is built on a poor grasp of the underlying principle of the public service, which is to serve as opposed to dictating to residents." In order to overcome this obstacle, the government has devised a plan that entails increasing the participation of people in the process of defining policies and priorities, with the goal of bringing about a shift in values and ethics across the public sector. This approach also aims to increase openness and accountability in the public service sector, both of which are essential to accomplishing the objectives outlined in Vision 2030 (Misigo, Were & Odhiambo, 2019). In assessing the performance of commercial state corporations, Kenya is plagued with various problems arising from political instability, a high degree of corruption, economic instability, and weak governance undermining performance of commercial state corporations in the country (Omar, 2020).

1.1.1 Corporate Culture

Corporate culture has a significant impact on organizational performance. A strong corporate culture can lead to increased employee engagement, productivity, and customer satisfaction. Conversely, a weak corporate culture can lead to decreased employee engagement, productivity, and customer satisfaction. The ideology, philosophy, mutual assumptions, expectations, attitude, beliefs, and norms that tie an organisation jointly (Robbins, Judge & Vohra, 2019). Coffey, Trew and Trigunarsyah (2012) explained the four Corporate Cultures (Involvement, consistency, adaptability and mission) depicted on Denison Corporate Culture model. The researcher further explains these dimensions as follows: involvement, the primary organizational dimension, ensures the participation of employees in decision making, Consistency dimension emphasizes on maintenance of the status quo by being well coordinated and well integrated. The third dimension, adaptability, depicts the ability of the organization in translating the demands of the business environment into action. The preceding dimension is mission whereby organizations devise meaningful long-term strategic direction and vision of the company.

According to Beth Williams (2021), Culture is the softer human element of business. It is how people think and feel their internalized values and beliefs. It follows that what blocks organizations from innovative success are human traits that resist experimentation and change. Indeed, at this time that has been renamed the age of changing, achieving performance excellence through traditional methods of management is not possible, and organizations are forced to use the new managerial approaches (Taslimi, 2015). Therefore, “to achieve high performance of organization, it is necessary to identify the factors affecting organizational performance.” In this regard, the studies have revealed that among the factors that can be effective on organizational performance are the company’s Corporate Culture and employee’s organizational commitment (Irefin & Mechanic, 2014). “The current study examined the relationship between organisation culture and performance in the Kenyan public sector in a commercial state corporation context.”

Nakiyaga and Anh (2017) undertook a study to investigate how Corporate Culture affects internal control effectiveness: the role played by top management - case study: Uganda Revenue Authority. The purpose of the study was to examine how company executives contribute to establishing effective internal controls, especially in organizations within emerging economies that are susceptible to corruption. The research approached this by analyzing the role of executives in shaping the firm’s culture. The study concluded that managers have a significant influence in aligning organizational culture to achieve the intended internal control objectives. The study by Nakiyaga and Anh (2017) had executives as the main respondents and how they set precedence in organisation culture for staff and how this affects the organisation performance in Uganda Revenue Authority which is a public sector institution. Corporate culture is recognized as a key intangible asset that is difficult to replicate and has a strong impact on organizational performance. Therefore, given the research background, this research aims to determine the dimensions of Corporate Culture, for instance, involvement, consistency, adaptability, and the influence of mission culture on organisation performance in commercial state corporations in Kenya.

1.1.2 Innovation practice

Various scholars and researchers have defined Innovation practice differently with Davila *et al.,* (2006) defining it as involvs acting on new ideas developed on how to do things with the aim of coming up with specific and tangible difference in a given area when the innovation practice is taking place (Davila *et al.*,2006).The Innovation practice concept was popularized by a German economist, Joseph Schumpeter where his analysis comprised of aspects of creativity, new services/products, research and development (R&D), advanced technologies and new processes, (P.A, 1995). According to Mayor (2003), innovation practice involves the successful operationalisation of new ideas developed within the setting of an organization so as to leverage its operations and improve its competitiveness. A number of studies have revealed different benefits associated with innovation practice. Some studies have argued the role of innovation practices particularly in boosting national growth through entrepreneurship (Ndemo & Maina, 2017). Polevoi (2013) also indicates that it is very crucial for a business to exploit new prospects and possibly gain competitive advantage through market, process and product innovation. "According to the literature review of the research it can be argued that if concept of Corporate Culture is comprehended properly, in addition to direct impact on organizational performance, it can indirectly influence the organizational performance through employee's organizational commitment."

Kemp and Folkeringa (2013) posit that understanding the relationship among innovation practice and performance of the organization in both small and large firms is appropriate for researchers, also for the decision makers, policy makers and managers of small and large companies. Polevoi (2013) adds that it is very important for a business to exploit new prospects and possibly gain competitive advantage through market, process and product innovation practices. The subject of understanding innovation practices and their relation with organization performance became even more important in recent past years, rationale is to encourage firms to do innovation practice that would lead to a better economic performance.

Suzana & Milica (2019),on their study importance of innovation practices in modern business conditions and their impact on the business performance of the organization, postulate that Organizational innovation practice performance includes product innovation practice performance and process innovation practice performance. Product innovation practice and process innovation practice have a positive effect on enterprise performance. These two innovation practice dimensions can benefit the company in improving its competitive position vis-a-vis competitors as well as market profitability. Innovation practice activities play a significant role in creating value for new and existing SMEs. Innovation practice affects business performance, but that does not mean that every innovation practice has a positive impact on performance. New scientific knowledge is necessary for the development of the organization in modern business conditions, and innovation practice and scientific research by competent researchers are essential in order to acquire new scientific knowledge, which can be applied in practice (Suzana & Milica,2019).

Kihiu (2017) studied the effect of perceived corporate innovation practice on customer satisfaction with mobile banking application at Chase Bank, Kenya. The study results showed that mobile banking application was clear and easy to use and understand. Findings from the study also revealed that usage of different range of mfukoni services have got a positive and significant effect on the customer's level of satisfaction. Improved efficiency of different mfukoni services increases the level of customer satisfaction. However, although Kihiu (2017) study is significant in many ways in terms of innovation practice and organisation performance (customer's level of satisfaction), the study contextually was based on the banking sector and looked at corporate innovation practice rather than the four main dimensions of innovation practices namely product, process, marketing and organisation innovation practices which were addressed in this study.

1.1.3 Regulatory Framework

The legal and regulatory framework is the basic mechanism outside the firm and refers to the laws and regulations that govern the establishment and cessation of firms and their operations in a country (Denise, 2001). The legal and regulatory framework also includes laws against corruption, laws pertaining to the protection of minority shareholders and stock exchange rules, Laws and regulations are determined at the societal level (Dyck, 2001) and represent what is generally socially acceptable (Dore, 1993). Regulatory policy or framework encompasses all the rules, procedures, and practices associated with regulation. "Requirements for public notice of proposed regulation, public access to key meetings, or disclosure of relevant information considered important by Governmental decision makers." "Regulatory policy can also include a variety of other rules that structure regulatory decision making, such as regulatory budgets, mandates, or requirements for legislative authorization of certain regulations initiated at a Ministry or agency level." Clune and Zehnder (2018) state that regulatory framework remains an important pillar to advance sustainability solutions within institutional settings. Similarly, Gupta (2018) submits that regulatory framework is one of the key mechanisms for strategic leaders to drive their organizations to sustainability.

According to Clune and Zehnder (2018), law and governance are important pillars to advance sustainability solutions within institutional settings. Unfortunately, sustainability is hardly an ongoing concern in the legal framework in Kenya particularly for the construction sector, and much of the sustainability initiatives are based on voluntary uptake (Onkangi & Getugi, 2020). This implies that effects of moderation of regulatory framework in the relationship between innovation practice and organisation performance may not be significant until there exists a holistic integration of sustainability related policies and laws within the key sectors in Kenya.

The world bank report (2021) on Corporate Governance and Fiscal Risks of Kenya's State Corporations, recommends the strengthening of the performance of Kenya's commercial State Corporations through; strengthening the legal framework and institutional structure; improving performance monitoring; and enhancing controls and transparency of State Corporations' operational performance and relations with the government. This study therefore interrogated these three priorities of commercial State Corporations reform strategy areas under regulatory framework variable since the commercial State Corporations are purely owned by the Kenyan Government and its government's mandate to institute regulatory framework and structures to achieve the objectives of the three commercial State Corporations reform priority areas.

1.1.4 Performance

Organization performance has been defined as the capability of firm to accomplish its goals and objectives with the help of talented administration, good governance and have a constant rededication to accomplish business objectives (Mahapatro, 2013). According to Ramanujan and

Venkatraman (1986), performance is often categorised as operational, financial, and organisational effectiveness. According to Sun et al. (2007), organisational performance is defined as customer and staff satisfaction. Similarly, as Kaplan and Norton (2005) noted, organisational success is determined by a corporation's ability to utilise its assets to foresee the long future. Individual engagement in the organisation moulds all practises connected to organisational objectives, which affects organisational success (Tseng & Lee, 2014). The degree to which a certain aim is achieved is referred to as organisational performance. Achievement may result in the attainment and effectiveness of a certain aim (Abu-Jarad et al. 2014). According to Hussain et al. (2018), organisational performance is related to a company's success and innovativeness. Lusthaus et al. (2002) define organisational performance as four factors: efficiency, effectiveness, financial viability, and organisational relevance.

Ramseook-Munhurrun, Lukea-Bhiwajee and Naidoo (2010) examined the issue of service quality in the public sector and proposed a framework that could be used to solve performance related problems among public organisations. In South Africa a number of scholars have carried out studies on the possible impediment to high performance in public organisations focused on human-related dimensions as the possible impediment (Ludy, 2005; Appel, 2006; Ramasodi, 2010; Mafini & Pooe, 2013). Although all these studies are important contributors to solving performance problems in the South African public sector, contextually it is an indisputable fact that further research is still merited to address performance in public related organisation in the Kenyan context and the impact of other factors that have not received much empirical attention in the past on organisational performance. Putriana, Wibowo, Umar and Riady (2015) investigated the effect of culture of a firm on work contentment, dedication to a firm and work productivity on Japanese motorbike companies operating in Indonesia. The intention of the research was to "undertake an investigation on the association of culture of a firm on workers' contentment and dedication, work contentment on firm dedication and culture of a firm, work contentment and firm dedication to work productivity. Information was obtained from 214 employees of major Japanese motorcycle manufacturers in Jakarta." The outcome revealed that culture of a firm is affirmatively and considerably linked to workers' contentment and organizational dedication.

Empirical evidence which connects innovation practice with organisational outcomes such as financial performance abounds in literature. In their study Costa and Cabrel (2014) studied the effect of differentiated knowledge source and learning process on technology capacity to innovate and competitive performance using selected Brazilian export companies. The study found the existence of a positive relationship between knowledge, innovative capabilities and competitive performance. This study conceptualized organisational performance based on four measures namely efficiency, effectiveness, financial viability, and organisational relevance as defined by Lusthaus et al. (2002). Against this background, "this study enters the fray of public organisational performance research from the angle of corporate culture and innovation practice that are critical ingredients of success, yet it hasn't received sufficient empirical attention in Kenyan context." The purpose of the study is to examine the relationship between organisation culture, innovation practice and regulatory framework on organisational performance in Kenya's commercial state corporations. The current also measured "the performance in commercial state corporations in Kenya from stakeholders, financial and product market performance aspects."

1.1.5 Commercial State Corporations in Kenya

The State Corporations Act (section 2 and 3), "defines a State Corporation as one established by order under the State Corporations Act, an Act of Parliament, a Bank or financial institution licensed under the Banking Act or Companies Act (where the Government has all or a controlling share) or a subsidiary of a State Corporation." A State Corporation does not include local authorities, co-operative societies, building societies or companies the Government does not wholly own or control. The Kenyan definition of State Corporation comprises commercial and noncommercial entities, regulatory bodies, services, universities, training institutions and research institutions. Semi-Autonomous Government Agencies ("SAGAs") and "Funds" are largely State Corporations (SCs) established under the State Corporations Act and are not treated separately under any other law, unless exempt from the Act (for example the Central Bank of Kenya and the Capital Markets Authority). Public funds are provided for in two ways. The first is "national public funds" that are established as State Corporations under their own laws or by the State Corporations Act. The second category is "other public funds", which are established predominantly under the Public Finance Management Act (successor of the Government Financial Management Act 2007), hence are not considered State Corporations and are fully administered and controlled by the line Ministry through the accounting officer such as Civil Servants Accident Claim Fund. The Inspectorate of State Corporations Applies the "Guidelines on Terms and Conditions of Service for State Corporations (2004), classify State Corporations into 8 broad functional categories based on mandate and core function: Financial, Commercial, Regulatory, Public Universities, Training and Research, Service, Regional Development Authorities, Tertiary Education and Training."

This study was based on "Commercial State Corporations, which refers to commercial entities where the government controls the majority or all of the shares." Commercial State Corporations include entities that; "generally operate on commercial principles to perform a strategic function profitably, are generally self-financing and sustaining, except in financing investment for public policy objectives; and are accountable to all stakeholders and the public through the relevant departmental and oversight committees of Parliament." In this respect this study examined the thirty two (32) commercial state corporations Kenya as of 30th June 2013 which is the latest data published by state corporations advisory committee. Non-commercial State Corporations are also distinct legal entities that are operationally autonomous from Government, however, they are expected to operate on a cost recovery basis and largely depend on monies appropriated by Parliament, levies and fees. They include regulatory agencies and statutory boards, research institutions, institutions of higher learning and referral hospitals. Non-commercial State Corporations deliver services on behalf of line Ministries and are funded mainly through the National Budgets in form of grants or loans from the Government (Consolidated National Government Investment Report 2019/20).

1.2 Statement of the Problem

Commercial state corporations in Kenya are critical instruments for advancing socio-economic development, providing essential goods and services, and contributing to national goals such as Kenya Vision 2030 and the Bottom-Up Economic Transformation Agenda. Despite their strategic importance, many of these corporations continue to face persistent challenges of inefficiency, financial unsustainability, weak governance, and limited capacity for innovation. Numerous reports by oversight bodies have raised concerns about mismanagement, low productivity, and poor service delivery, with some corporations requiring continuous government bailouts to remain operational (State Corporations Advisory Committee, 2023). These challenges undermine the corporations' ability to deliver value to citizens and compromise their role as engines of national development. While reforms such as the Mwongozo Code of Governance for State Corporations were intended to strengthen accountability, transparency, and performance, the persistent struggles of these organizations suggest that deeper structural and organizational factors must be examined.

A growing body of literature has underscored the role of corporate culture in shaping organizational effectiveness, with studies showing that values, norms, and behavioral patterns influence employee engagement, innovation, and overall performance outcomes (Denison et al., 2012; Joseph & Kibera, 2019; Maina, 2016). Similarly, innovation practices have been identified as critical for organizational adaptability and competitiveness, enabling firms to respond to technological changes, globalization, and customer expectations (Kiarie & Lewa, 2019; Riungu & Munene, 2020). Regulatory frameworks, on the other hand, are widely recognized as important in creating enabling or constraining environments for organizations to thrive, shaping accountability and compliance mechanisms that directly impact performance (Omondi et al., 2017; Karungani & Ochiri, 2020). However, despite this growing scholarship, empirical studies in the Kenyan context have tended to examine these variables in isolation, focusing either on the direct link between corporate culture and performance, or on the independent effects of innovation and regulatory frameworks. Few studies have integrated these constructs into a holistic model that captures their interactive effects on the performance of commercial state corporations.

Three specific empirical gaps can therefore be identified. First, there is limited empirical evidence on the mediating role of innovation practices in explaining how corporate culture influences performance in state corporations, despite evidence from private-sector studies suggesting that innovation is often the mechanism through which culture translates into tangible outcomes. Second, there is insufficient analysis of the moderating role of regulatory frameworks in determining the strength and direction of the relationship between culture and performance, even though agency theory highlights regulation as a key mechanism for aligning managerial behavior with shareholder and public interests. Third, most existing studies on organizational culture, innovation, and regulation in Kenya have focused on microfinance institutions, commercial banks, or small and medium enterprises, leaving a significant gap in relation to commercial state corporations, which face unique governance challenges due to their dual mandate of commercial viability and public accountability.

This study therefore “seeks to address these gaps by developing and testing an integrated model that examines the influence of corporate culture on the performance of commercial state corporations in Kenya, with innovation practices as a mediating variable and the regulatory framework as a moderating variable.” By filling this gap, the study will generate insights not only for strengthening the performance of commercial state corporations but also for informing policy reforms and governance strategies that balance efficiency, accountability, and innovation in Kenya’s public sector.

1.3 General objective of the study

The main aim of this research was to examine how corporate culture, innovation practices, and regulatory frameworks influence the performance of commercial state corporations in Kenya.

1.3.1 Specific objectives of the study

The specific objectives of the study are:

i. To establish the relationship between corporate culture and performance of commercial state corporations in Kenya.
ii. To establish the mediating role of innovation practice on the relationship between corporate culture and performance of commercial state corporations in Kenya.
iii. To determine the moderating role of regulatory framework on the relationship between corporate culture and performance of commercial state corporations in Kenya.
iv. To determine the moderated mediation effect of regulatory framework and innovation practice on the relationship between corporate culture and performance of commercial state corporations in Kenya.

1.4 Justification of the study

To the researchers, “the study examined the immediate connection between organisation performance and corporate culture and the mediating role of innovation practice in the relationship. Further the study examined the moderated mediation role of regulatory framework and innovation practice on the relationship between corporate culture and organisation performance.” Commercial State Corporations were selected because they operate on commercial principles, contribute substantially to national revenue and their performance directly impacts economic outcomes. Focusing on commercial State Corporations allows analysis of culture-innovation-performance relationships in entities with profit/market objectives, unlike regulatory or purely service State Corporations. Outputs are expected to support researchers and professionals. They may support "expansion of the general body of knowledge" on the issue. The findings detail the links among variables. The conclusions supply "a valuable reference for future examinations" in literature. In addition, the study informed academicians on the present gaps in knowledge on corporate culture, process innovation practice, product innovation practice, marketing innovation practice and organisational innovation practice and how those gaps could be addressed. “The study findings are a resource base to other scholars and researchers who may be interested to further research in this field.”

The findings from this study “assisted the policy makers in the Commercial State Corporations in Kenya to implement strategies of achieving high performance through inculcating innovation practice in these Commercial State Corporations.” Furthermore, “the discoveries may make the policy makers be mindful of the significance of research, corporate culture, innovation practice as well as development in assistance in unique and new product development that are exceptionally competitive in the market and would in this manner led to improvement of the organization performance.”

The results of this study were of interest to managers of commercial energy and transport state corporations on application of innovation practice. Successful chief executive officers understand the need for a corporate culture and invest significant resources on innovation practice and regulations required for enhanced organisation performance. This study helped the decision makers of those organizations who were practicing the three types of innovation practices that is process innovation practice, product innovation practice, marketing innovation practice and organisational innovation practice. So with the help of the conclusions which are to be generated later, decision makers can make their decisions of applying innovation practices in their organizations carefully because results would help them to see which innovation practice is contributing positively to the performance of the organization.

1.5 Scope of the Study

This study on corporate culture, innovation practice, regulatory framework and performance of commercial state corporations in Kenya was conducted between June 2023 and November 2024 through cross sectional survey research design. The target population for this study were all the thirty two (32) commercial state corporations Kenya as of 30th June 2023 (State Corporations Advisory Committee, 2023) which was the latest data published by state corporations advisory committee then.

1.6 Limitations of the study

Some limitations of this study included; “time constraints because of conducting a census which normally takes a long time to complete; some respondents did not answer and return the questionnaire in good time to facilitate analysis; inadequate response to research instrument guidelines for example some respondents intentionally or unintentionally left some questions unanswered or simply ignored them; fear of giving confidential information by some respondents adversely affected the quality of data.”

1.7 Delimitation of the study

This study was confined to “the commercial state corporations in Kenya whose findings did not apply wholesomely to Ministries, Departments, Commissions and Public Service in general as some issues which were addressed are specific to these commercial State Corporations.” “However, the findings addressed issues of achieving efficiency, economy and effectiveness in State Corporations performance in both Public and Private Organizations in Kenya.” Secondly, “the study was limited to four variables to determine performance of State Corporation for the purpose of simplicity.” Thirdly, “the study covered the period from the year 2008 when performance appraisal was initiated in Government.”

1.8 Chapter Summary

This first chapter provided the background of the study by outlining the reasons for the study research objectives, the scope, the significance of the study, key variables, research objectives and their linkages. The study variables; innovation practice, corporate culture, regulatory framework and performance were discussed. The conceptual, contextual and methodological gaps were explained and the gaps the study wished to fill. The study established the relationship between; innovation practice, corporate culture, regulatory framework and performance commercial state corporations in Kenya. The scope, significance and limitations of the study were also covered in this chapter.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter provides a review of literature aligned with the research objectives. It outlines the theoretical foundations that support the study variables and introduces the conceptual framework showing how the independent and dependent variables relate to each other, which includes; innovation practice, corporate culture, regulatory framework and organisation performance. Besides, it contains an empirical review showing the contributions of other scholars towards the area being researched, critical review, research gaps and summary of the entire chapter.

2.1 Theoretical Review

A theoretical framework is the lens selected by the researcher to shape the study (Imenda, 2014). It involves using specific concepts or theories to clarify a phenomenon and provide direction for analysis, or shed some light on a particular phenomenon or research problem. By setting boundaries, the theoretical framework narrows the study to particular variables and provides a lens through which data can be interpreted (Swanson, 2013). Scholars emphasize that theoretical frameworks are vital in organizing research, defining its scope, and linking it to prior knowledge while still allowing room for new contributions (Saunders et al., 2019; Creswell & Creswell, 2022). "A variety of theories and models can be utilized to understand the theoretical support of corporate culture, innovation practice, regulatory framework, and organizational performance relationships." This research draws on several key theories, including the Denison Culture Model, Diffusion of Innovation Theory, New Public Management, and Shareholder Theory. Of these, the Denison Culture Model forms the main foundation (Akpa et al., 2021; Ghosh & Srivastava, 2023).

2.1.1 The Denison Culture model

It was developed by Daniel Denison in the 1980s and has since evolved into one of the most extensively utilized cultural frameworks worldwide. The Denison Culture Model has provided a practical and relevant framework that clearly demonstrates the connection between an organization's culture and its level of productivity. The model is based on four fundamental aspects of organizational culture, namely engagement, consistency, flexibility, and purpose

(Denison, 1980). Within these four categories, there are three sub-groups for each of the fundamental aspects. Contemporary studies continue to affirm the robustness of the Denison model, noting that its cultural dimensions are strongly associated with performance, adaptability, and innovation in diverse organizational contexts (Akpa et al., 2021; Alharbi, 2021; Ghosh & Srivastava, 2023).

As a direct consequence of this, a model that illustrates the connection between organizational culture and productivity and that includes twelve (12) distinct aspects of various models of organizational culture have been proposed. The Denison model evaluates an organization’s effectiveness using factors such as market expansion, profitability growth, development of new products and services, service and product quality, employee satisfaction, and overall operational efficiency. Consequently, it has become one of the most frequently applied frameworks for linking culture to organizational performance. Denison exemplifies how the organization’s effectiveness, flexibility, consistency, engagement, and purpose are mutually influenced by the four cultural variables (Denison, Hooijberg, Lane, & Lief, 2012). Recent empirical work confirms that the twelve cultural dimensions of the Denison model remain robust predictors of performance, innovation, and employee commitment across both public and private organizations (Akpa et al., 2021; Shakil, 2022; Ghosh & Srivastava, 2023).

Adaptability is a condition in which an organisation is ready to adapt flexibly to the needs of its customers, take chances, learn from their own failures, and be open to changes. It is a representation of the organisation's capability of responding effectively to the demands imposed by the operating environment. Involvement is a state in which employees feel that their activity is tightly linked with the goals of the organisation, that they have been empowered, that teamwork is to be valued, and that priority is given to the development of employees' capabilities. Consistency reflects the extent of integration and coordination within an organization. Involvement describes the degree to which employees perceive their roles as closely aligned with organizational goals. Mission refers to the organization’s purpose and long-term strategic direction, built on its guiding philosophy and oriented toward the future. Through mission, organizations establish a clear vision and strategic path for sustained growth. Each of the four dimensions of organizational culture is assessed using three indicators: involvement is measured through empowerment, teamwork, and capacity building; consistency through shared values, coordination and integration, and consensus; adaptability through learning, customer focus, and responsiveness to change; and mission through vision, objectives, and strategic planning Nieminen, Hooijberg & Kotrba, 2021)

The Denison Culture Model is an extremely helpful tool for gaining knowledge of and evaluating the culture of commercial state corporations, as well as how culture impacts organizational performance. It offers a thorough framework for analyzing the four major aspects of organizational culture, which are the organization's purpose, consistency in behavior, flexibility, and engagement of its members. In order to conduct the commercial state corporations' culture assessment, the Denison Culture Model was applied. A survey instrument was used to evaluate employee perceptions of the culture of commercial state corporations, and the findings were subsequently used to build a profile of the culture that could suggest areas for improvement. Performance inside an organization is significantly influenced by the prevailing culture. Strong cultures are associated with better staff engagement, higher productivity, and improved customer satisfaction, whereas weak cultures often lead to low morale, reduced efficiency, and poor service delivery. The Denison Culture Model has been widely used to enhance organizational performance by guiding managers in the formation and upkeep of robust cultures (Denison et al., 2012; Akpa et al., 2021). Recent studies further confirm that organizations leveraging the Denison framework are better able to foster productive work environments, recruit and retain top talent, and sustain competitiveness in dynamic environments (Shakil, 2022; Ghosh & Srivastava, 2023; Zhang & Li, 2025).

2.1.2 Diffusion of Innovation theory

The diffusion of innovations theory was developed by E. M. Rogers, a communication theorist at the University of New Mexico, in 1962. The theory explains the passage of a new idea through stages of adoption by different people who participate in or begin using the new idea. The main categories of adopters in the diffusion of innovations theory are: Innovators – those who are open to risks and the first to try new ideas; Early adopters – people who are interested in trying new technologies and establishing their utility in society; Early majority – those who pave the way for the use of an innovation within mainstream society; Late majority – people who follow the early majority into adopting innovations; and Laggards – people who lag behind the general population in adopting new ideas. The diffusion of innovations theory is therefore a hypothesis outlining how new technological and other advancements spread throughout societies and cultures, from introduction to widespread adoption (Rogers, 1962). Recent studies have reaffirmed its relevance, showing that the stages of adoption remain applicable in contemporary contexts such as digital transformation, e-governance, and organizational innovation (Greenhalgh et al., 2022; Ogunyemi & Ojo, 2023; Zhang & Li, 2025).

According to Tornatsky and Klein (1982), relative advantage and complexity are mutually exclusive meaning that one can easily predict either the extent or rate at which the new technology or idea would diffuse. The work of Moore and Benbasat (1991) was an extension on the previous work by Roger (1983) and other scholars like Tornatsky and Klein (1982 and Brancheau and Wetherbe (1990) who examined seven characteristics of innovation practices where among the seven were the above three: relative advantage, compatibility and trialability. Ease of use which is the fourth characteristic has a close relationship with Rogers' complexity characteristic because they both are subjective in that they can be interpreted and viewed differently by different individuals depending their perceptions and background information. These findings were also supported by Fishbein and Ajzen (1980) who argued that attitudes towards an object can differ widely across people because of their socialization. Rogers (1983) identified innovation practice image as an important component within an individual in relation to relative advantage because image helps in creating fantasies about the expected output in terms of enhanced social status (Lundblad & Jennifer, 2003).

Organizations are referred to as social system because of their behaviour of being environmental dependent where they get inputs from the environment and release outputs into the same environment. However, various departments or sections found in an organization serve as social systems because they allow employees who are great stakeholders in innovation practice to socialize with one another. The extent of socialization and interaction among departments and strategic business units affect the adoption of innovation practice. As employees go about interacting with one another, they form some perceptions about one another and some informal grouping which is a normal group dynamics aspect (Lundblad & Jennifer, 2003). This theory on diffusion of innovation practice among organizations heavily relies on the internal decision making processes regarding the adoption and usage of new technologies and ideas. Rogers' theory has been criticized for failure to identify the conducive environment for optimal diffusion of innovation practice as it is not always certain that innovation practice would diffuse at the same rate among two different organizations (Lundblad & Jennifer, 2019).

The diffusion of innovations theory seeks to explain how and why new ideas and practices are adopted, including why the adoption of new ideas can be spread out over long periods. The way in which innovations are communicated to different parts of society and the subjective opinions associated with them are important factors in how quickly diffusion occurs. This theory is frequently applied when companies are developing marketing strategies for new products and building market share (Rogers, 1962; Greenhalgh et al., 2022). The theory classifies adopters into five groups: innovators, early adopters, the early majority, the late majority, and laggards. In marketing, the diffusion of innovations theory has been widely used to explain product uptake and consumer behavior, while in public health it has been applied to encourage populations to adopt new, healthy behaviors (Valente & Pitts, 2021; Ogunyemi & Ojo, 2023).

Within organizational settings, the theory illustrates how decision-making processes affect the diffusion of innovation practices. It highlights how characteristics such as relative advantage, compatibility, complexity, trialability, and observability interact to influence the adoption and use of new ideas among organizations of different sizes, ages, and levels of experience. Recent evidence shows that these characteristics remain significant predictors of adoption in contexts such as e-governance, digital finance, and technological innovations (Al-Saedi et al., 2022; Zhang & Li, 2025). Importantly, in African public-sector contexts, diffusion theory has been applied to explain the uptake of innovations in service delivery, such as the adoption of e-procurement and ICT-enabled governance in Kenya, where institutional culture and regulatory frameworks significantly influence the pace of adoption (Mutimba & Okech, 2021; Kimani & Omondi, 2022). The theory therefore provides a robust explanation of how innovation practices evolve within organizations and why some organizations choose to innovate while others lag behind.

2.1.3 The New Public Management Theory

The New Public Management (NPM) theory was proposed by Hood (1991) in the 1980s and 1990s while arguing for the restructuring of the public sector along more cost-efficient and effective lines. NPM argues that private sector management methods are more effective than traditional public administration approaches, assuming that applying such practices enhances efficiency and service delivery. It also advocates for increased incorporation of private sector principles within the public sector. This conceptualization emerged during a period of economic recession and fiscal crises, particularly in the United Kingdom under Prime Minister Margaret Thatcher and in various municipal governments in the United States (International Public Management Journal, 2001; Hood, 1991).

NPM aimed to apply private sector management principles to public sector organizations, emphasizing efficiency, accountability, and results-oriented governance, which marked a significant departure from the traditional bureaucratic model that prioritized adherence to rules and procedures over outcomes. Recent studies note that NPM reforms remain influential in public sector transformation, though their applicability has been contested in developing countries (Pollitt & Bouckaert, 2017; Osborne, 2021). In the African context, NPM principles have been applied in reforms to enhance performance and accountability in state-owned enterprises, with evidence from Kenya showing mixed outcomes—improved efficiency in some parastatals but persistent challenges in accountability and sustainability (Mutinda & Ngugi, 2022; Wanyama, 2021).

New Public Management perspectives emphasize compliance with ethics, transparency, equality, fairness, responsibility, accountability, prudence, participation, responsiveness to the necessities of the people and efficiency in the administration of public entities. Mongkol asserts that New Public Management reforms was aimed at improving the quality of public services, saving public expenditure, increasing the efficiency of governmental operations and making policy implementation more effective (Mongkol, 2011). The belief that large and monopolistic public bureaucracies are inherently inefficient was a critical force driving the emergence of the new public management (Andrews, 2012). Zungura also supports the theory, emphasizing that the central idea of New Public Management is the application of market-based approaches to enhance public sector performance. The key features of new public management include performance management, e-governance, contracting out and outsourcing, decentralization and accountability among others (Zungura, 2014).

The core principles of New Public Management (NPM) consist of essential concepts designed to improve the efficiency and effectiveness of delivering public services. Market Orientation is one of these principles, as NPM promotes the introduction of market mechanisms into public service delivery, such as competition, privatization, and outsourcing, to enhance efficiency and responsiveness. This principle is rooted in the belief that applying market dynamics can lead to improved service quality and cost-effectiveness, as public organizations adopt practices commonly found in the private sector (Hood, 1991). By fostering competition among service providers, NPM encourages innovation and responsiveness to citizen needs, ultimately aiming to create a more efficient public sector. Another important principle is Decentralization, which advocates for decentralizing decision-making authority to empower local managers and organizations, thereby allowing for more tailored and effective service delivery. This principle recognizes that local managers are often better positioned to understand the specific needs of their communities and can make decisions that reflect those needs more accurately than centralized authorities (Minogue, 2001). Decentralization is intended to reduce bureaucratic red tape and enhance the agility of public organizations, enabling them to respond more effectively to changing circumstances and demands. Performance Measurement is also emphasized within NPM, as it highlights the importance of performance indicators and results-based management, focusing on outcomes rather than processes to evaluate the effectiveness of public services. This principle encourages public organizations to set clear performance targets and measure their success against these benchmarks, thereby fostering a culture of accountability and continuous improvement (Pollitt & Bouckaert, 2000). By prioritizing measurable outcomes, NPM aims to ensure that public services deliver tangible benefits to citizens and that resources are allocated efficiently. Lastly, NPM promotes Customer Orientation, encouraging a shift in perspective from viewing citizens as passive recipients of services to recognizing them as customers whose needs and preferences should drive service delivery. This customer-centric approach emphasizes the importance of understanding and responding to the expectations of citizens, thereby enhancing satisfaction and engagement with public services (Osborne & Gaebler, 1992). By treating citizens as customers, public organizations are encouraged to innovate and improve their service offerings to meet the evolving demands of the population.

Despite its widespread adoption, the New Public Management (NPM) theory has faced significant criticism from various scholars and practitioners. Critics argue that the focus on efficiency and market mechanisms can undermine the core values of public service, such as equity, accountability, and social justice. For instance, Hood (1991) highlighted that NPM could lead to a fragmented public sector, where the emphasis on competition and performance metrics may compromise the quality of services and the public interest. This fragmentation can result in a lack of coherence in service delivery, as different agencies may prioritize their own performance targets over collaborative efforts to meet the broader needs of the community. Furthermore, Naomi Klein has criticized NPM for enriching corporate elites while impoverishing communities, arguing that the relentless pursuit of profit can lead to social and economic injustices (Klein, 2007). Klein contends that the privatization and outsourcing of public services often favor large corporations that prioritize profit margins over the welfare of citizens, and this can exacerbate inequalities, as marginalized groups may find themselves with reduced access to essential services, further entrenching social disparities. Critics also point out that the customer-oriented approach of NPM can lead to a commodification of public services, where the intrinsic value of public goods is overshadowed by a focus on profitability and efficiency. Moreover, the reliance on performance metrics can create a culture of "gaming the system," where public managers may manipulate data to meet targets rather than genuinely improve service quality. This can lead to a superficial understanding of performance that does not reflect the actual experiences of service users, and as a result, the emphasis on quantifiable outcomes may detract from the qualitative aspects of public service, such as compassion, empathy, and community engagement, which are essential for effective governance.

New Public Management (NPM) is highly relevant to examining corporate culture, innovation practices, regulatory frameworks, and performance in Kenya’s commercial state corporations, as it offers a holistic framework for understanding how these entities can integrate private sector approaches to improve efficiency and accountability while continuing to meet their public service obligations. By examining how NPM principles can be integrated into the governance of state corporations, researchers can explore the impact of corporate culture on innovation practices and how regulatory frameworks can support or hinder these efforts. For instance, the integration of NPM principles can lead to a more entrepreneurial culture within state corporations, encouraging innovation and responsiveness to market demands (Osborne, 2021; Pollitt, 2022). This shift is particularly important in the Kenyan context, where state corporations play a crucial role in economic development and service delivery (Mutinda & Ngugi, 2022; Wanyama, 2021).

Furthermore, NPM's emphasis on performance measurement aligns with the need to evaluate the effectiveness of state corporations in delivering services and achieving financial sustainability. By focusing on measurable outcomes, state corporations can better assess their impact on the communities they serve and make informed decisions to improve service delivery (Kanyinga & Njenga, 2023; Okech & Atieno, 2021). Additionally, the regulatory frameworks in place can either facilitate or obstruct the implementation of NPM principles, making it essential to understand how these frameworks interact with corporate culture and innovation practices to identify barriers to effective governance and performance. For example, overly rigid regulations may stifle innovation, while supportive policies can empower state corporations to adopt more flexible and responsive management practices (Mensah & Boateng, 2024; Kimani & Omondi, 2022).

This theoretical lens is therefore crucial for analyzing the balance between profit maximization and public service obligations, making it a vital component of the study. In summary, New Public Management provides important perspectives on the processes of public sector reform and how these reforms influence the performance of commercial state corporations in Kenya, emphasizing the need for a careful balance between efficiency, accountability, and social responsibility. By leveraging NPM principles, state corporations can enhance their operational effectiveness while remaining committed to their public service roles, ultimately contributing to the broader goals of national development and social equity (Mutimba & Okech, 2021; Joseph & Kibera, 2019).

2.1.4 Agency theory and Shareholders Perspective

Agency Theory, originally advanced by Jensen and Meckling (1976), provides critical insights into the relationship between shareholders (principals) and managers (agents) within organizations. The theory argues that a conflict of interest often arises when managers pursue their own objectives—such as personal utility maximization—at the expense of shareholder wealth. This misalignment is particularly relevant in state-owned enterprises and corporations, where diffuse ownership and political influence can exacerbate agency problems (Donaldson, 2021; Mensah & Boateng, 2024).

From a shareholders' perspective, Agency Theory underscores the importance of governance mechanisms—such as performance-based incentives, effective regulatory frameworks, transparency, and robust monitoring systems—to align managerial behavior with the goal of maximizing organizational value (Hayes, 2022; Zhang & Li, 2025). For commercial state corporations in Kenya, this theory is especially relevant because the state, acting as the primary shareholder, delegates decision-making authority to boards and managers, thereby creating potential for agency conflicts that can undermine efficiency, accountability, and performance (Kimani & Omondi, 2022; Omondi & Waiganjo, 2023).

In this study, Agency Theory complements Shareholder Theory by highlighting the governance challenges faced in state corporations and by providing a lens through which the moderating role of regulatory frameworks can be better understood. Specifically, the theory suggests that effective regulatory oversight reduces agency costs by ensuring managers act in the best interests of shareholders while also balancing the broader public service obligations of state corporations (Ghosh & Srivastava, 2023; Mensah & Boateng, 2024).

Shareholder Theory, also known as the Friedman Doctrine, was formally conceptualized in 1970 by economist Milton Friedman in his seminal essay "The Social Responsibility of Business is to Increase its Profits," published in The New York Times Magazine (Friedman, 1970), and the theory's roots can be traced to classical economic theories, particularly those of Adam Smith, who emphasized the role of self-interest in economic activities (Friedman, 2009). Shareholder Theory posits that the primary responsibility of a corporation is to maximize profits for its shareholders, emphasizing that corporate executives, as agents of shareholders, must focus solely on increasing shareholder value while operating within legal and ethical boundaries (Friedman, 1970), and this perspective views the corporation as a nexus of contracts among various stakeholders, with shareholders being the most critical due to their role as residual claimants—the last to receive any financial returns after all other obligations have been met (Meckling & Jensen, 1976). Friedman (1970) argued that the social responsibility of business is to increase its profits, asserting that any diversion of corporate resources towards social causes, without shareholder consent, effectively amounts to spending someone else's money, and this view aligns with the agency theory, which posits that managers are obligated to act in the best interests of shareholders, thereby prioritizing profit maximization as the primary goal of corporate governance (Jensen & Meckling, 1976). The implications of Shareholder Theory have been profound, influencing corporate practices and governance structures, particularly in the context of executive compensation and performance metrics, which are often tied to shareholder returns (Bower & Paine, 2017).

The major proponents of Shareholder Theory include several influential figures who have shaped its development and application in the business world, with Milton Friedman as the primary architect of Shareholder Theory, who argued that the sole social responsibility of businesses is to maximize profits for their shareholders while operating within legal and ethical boundaries, and in his 1970 essay, "The Social Responsibility of Business is to Increase its Profits," published in The New York Times Magazine, Friedman asserted that corporate executives are agents of the shareholders and must prioritize their interests above all else (Friedman, 1970), emphasizing that any diversion of corporate resources towards social causes, without shareholder consent, effectively amounts to spending someone else's money (Friedman, 2009). William Meckling and Michael C. Jensen expanded upon Friedman's ideas in their influential 1976 paper titled "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure," providing a quantitative economic rationale for maximizing shareholder value and arguing that the agency relationship between managers and shareholders necessitates a focus on profit maximization to align the interests of both parties (Meckling & Jensen, 1976), and their work laid the groundwork for understanding the implications of corporate governance and the importance of aligning managerial incentives with shareholder interests. Joseph L. Bower and Lynn S. Paine, as Harvard Business School professors, contributed to the development of Shareholder Theory by examining its influence on financial communities and business practices, noting that the doctrine of maximizing shareholder value has become pervasive in the business world and affects various aspects of corporate governance, including performance measurement, executive compensation, and corporate responsibility (Bower & Paine, 2017), and their analysis highlights the practical implications of Shareholder Theory in shaping corporate behavior and decision-making processes. These proponents have significantly influenced the discourse surrounding corporate governance and the role of businesses in society, reinforcing the idea that profit maximization is central to corporate purpose.

The fundamental principles of Shareholder Theory are essential for understanding its implications in corporate governance and management practices, with Shareholder Primacy asserting that shareholders have the primary claim on corporate assets and profits as the owners of the corporation, emphasizing that the interests of shareholders should take precedence over those of other stakeholders, such as employees, customers, and the community (Friedman, 1970), and this perspective is rooted in the belief that by focusing on maximizing shareholder value, corporations can create overall economic efficiency and prosperity, benefiting society at large (Jensen & Meckling, 1976). The Agency Relationship in the context of Shareholder Theory indicates that managers act as agents for shareholders (the principals) and are expected to align their interests with the goal of maximizing shareholder wealth, which is critical because it establishes the expectation that corporate executives would prioritize the financial interests of shareholders in their decision-making processes (Meckling & Jensen, 1976), highlighting the potential conflicts of interest that can arise when managers pursue personal goals that may not align with shareholder interests, thus necessitating mechanisms to ensure accountability and alignment (Bainbridge, 2024). According to Profit Maximization, the primary goal of a corporation, as outlined by Shareholder Theory, is to maximize profits while operating within legal and ethical boundaries, underscoring the belief that profit maximization is not only a legal obligation but also a moral imperative for corporate executives (Friedman, 1970), and by focusing on profitability, corporations can ensure their sustainability and ability to provide returns to shareholders, which in turn supports broader economic growth (Bower & Paine, 2017). Furthermore, the Legal and Economic Foundations of Shareholder Theory are grounded in legal principles that prioritize shareholder rights and economic efficiency, with the legal framework surrounding corporate governance, particularly in jurisdictions like Delaware, reinforcing the notion that corporate directors have a fiduciary duty to act in the best interests of shareholders (Bainbridge, 2024), which supports the argument that maximizing shareholder value is not only a business strategy but also a legal obligation, thereby shaping corporate behavior and governance structures (Smith, 2023). These principles collectively form the basis of Shareholder Theory, influencing corporate governance practices and shaping the expectations of corporate executives in their decision-making processes.

Shareholder Theory has faced significant criticism from various quarters, raising important concerns about its implications for corporate governance, ethics, and social responsibility, with moral and ethical critics arguing that the theory's singular focus on profit maximization can lead to unethical business practices and a neglect of social responsibilities, contending that prioritizing shareholder value often comes at the expense of ethical considerations, such as fair labor practices, environmental sustainability, and community well-being (Freeman, 1984), and this critique emphasizes the moral obligation of corporations to consider the broader implications of their actions and to operate in ways that contribute positively to society (Paine, 2003), which has led many to argue for a more balanced approach to corporate governance that integrates ethical considerations alongside financial performance. Additionally, Stakeholder Theory advocates criticize Shareholder Theory for its narrow focus on the interests of shareholders, arguing that it is essential to consider the interests of all stakeholders, including employees, customers, suppliers, and the community (Freeman, 1984), asserting that corporations have a responsibility to create value for all stakeholders, not just shareholders, and that doing so can lead to sustainable business practices and long-term success, as prioritizing stakeholder interests can foster stronger relationships and enhance corporate reputations, ultimately benefiting shareholders as well (Harrison & Wicks, 2013). Economic critics highlight how Shareholder Theory can promote short-termism, where managers prioritize immediate financial returns over long-term strategic investments, with this focus on quarterly earnings potentially leading to decisions that undermine a company's future viability, such as cutting research and development budgets or neglecting employee training (Koller, Meyer, & Teece, 2010), and they argue that an excessive emphasis on shareholder value can contribute to financial instability, as evidenced by the 2008 financial crisis, where short-term profit motives led to risky behaviors in the financial sector (Stiglitz, 2010). Furthermore, author and activist Naomi Klein has been a vocal critic of Shareholder Theory, arguing that it enriches corporate elites while impoverishing communities, and in her book The Shock Doctrine: The Rise of Disaster Capitalism, Klein discusses how the prioritization of shareholder interests often results in the exploitation of vulnerable populations and the environment (Klein, 2007), contending that the relentless pursuit of profit can lead to social and economic injustices and calling for a reevaluation of corporate priorities that considers the broader societal impact of business decisions. These criticisms collectively underscore the limitations of Shareholder Theory and highlight the need for a more holistic approach to corporate governance that balances profit maximization with ethical considerations and social responsibilities.

Shareholder Theory is particularly relevant to the study of commercial state corporations in Kenya for several reasons, as it provides a framework for understanding the complex dynamics between profit maximization and public service obligations, with organizational structure impact being one of the key areas where Shareholder Theory helps analyze how state corporations balance profit maximization with their public service obligations, allowing researchers to explore how the organizational structure of these corporations influences their ability to meet both financial goals and societal needs (Riany, 2021), and understanding this balance is crucial, as it can reveal the effectiveness of governance structures in promoting both profitability and service delivery. Additionally, in terms of performance measurement, the theory offers metrics for evaluating the financial performance of state corporations, which is essential for assessing their operational efficiency, and by focusing on shareholder value, researchers can examine how capital structure affects organizational performance, providing insights into the financial health of these entities (Riany, 2021), making this performance measurement vital for identifying areas of improvement and ensuring that state corporations can sustain their operations without excessive reliance on government funding. Furthermore, regulatory framework analysis is another area where Shareholder Theory assists in understanding how regulatory environments influence corporate governance in Kenya, providing insights into how state corporations can balance shareholder interests with public service mandates, particularly in a regulatory landscape that may prioritize different stakeholder needs (Riany, 2021), which is crucial for evaluating the effectiveness of existing regulations and identifying potential reforms that could enhance corporate governance. The theory also plays a significant role in examining innovation and corporate culture, helping to assess how a profit-oriented culture influences innovation practices within state corporations, and by understanding the relationship between shareholder returns and innovation investments, researchers can determine whether a focus on profit maximization stifles or encourages innovation (Riany, 2021), which is particularly relevant in a rapidly changing economic environment where innovation is critical for competitiveness. Lastly, in the context of reform, Shareholder Theory is relevant to ongoing reforms in Kenyan state corporations, as it provides a framework for evaluating the effectiveness of current governance structures, and as the government seeks to improve the performance and efficiency of these corporations, understanding the principles of Shareholder Theory can help identify best practices and areas for reform (Riany, 2021), with this relevance being heightened by the need for state corporations to operate effectively while fulfilling their public service mandates. The significance of Shareholder Theory in this context is particularly pronounced given Kenya's current focus on enhancing the performance and efficiency of state corporations while maintaining their public service obligations, and by applying this theoretical framework, researchers can analyze how these organizations can effectively balance profit maximization with their broader societal responsibilities, making it a crucial component of the study.

2.2 Empirical Literature Review

This section discussed different reviewed research literatures and articles from different authors, related to current study to bring out the study gaps whether methodological, conceptual or contextual.

2.2.1 Corporate culture and organisational performance

In a research conducted by Dahie, Takow, Nur, and Osman (2020), the focus was on investigating the impact of organizational culture on employee performance within the context of telecommunication firms located in Mogadishu, Somalia. The paper had three primary aims: “The study sought to examine the link between competitive organizational culture and employee performance, explore the relationship between entrepreneurial culture and employee performance, and assess the connection between consensual culture and employee performance.” Using an appropriate sampling approach, the researchers collected 80 questionnaires from three telecommunications companies in Mogadishu. Correlation analysis showed that competitive, entrepreneurial, and consensual cultures all had a significant positive effect on employee performance, which was the dependent variable. Regression results further validated that these cultural dimensions exerted statistically significant, positive, and linear effects on performance.. Similar findings have been reported in other organizational settings, where corporate culture has been shown to influence employee commitment, innovation, and overall productivity (Alharbi, 2021; Ahmed & Shafiq, 2022). The current study builds on this foundation by exploring the relationship between corporate culture and the performance of commercial state corporations in Kenya, where adaptive and participatory cultural traits are increasingly recognized as drivers of improved efficiency and service delivery (Shakil, 2022; Kimani & Omondi, 2022).

The study by Waheed, Syed, Pervaiz and Altaf (2017), investigated the postulated relationship between Corporate Culture and business performance in the banking sector in Pakistan. The need to evaluate this relationship is supported by prior studies. Through a survey approach, 265 responses were collected from middle managers working in the five largest banks in Pakistan. Stratified random sampling was applied to select the participants. Data analysis was conducted using Smart-PLS 3.0, which is increasingly recognized for its reliability in producing accurate results. Findings revealed that “corporate culture has a strong positive association with business performance in Pakistan’s banking sector.” The study by Waheed et al. (2017) is noteworthy as it confirmed that organizational culture significantly influences business performance within the banking industry in Pakistan. The current research was conducted in Kenya, focusing specifically on state-owned commercial corporations. The state-owned commercial corporations possess organisational structures that vary from those of banks, this in turn, can directly or indirectly influence their organizational culture and, consequently, their overall performance.”

In a 2022 study by Shakil explored “how organizational culture influences management practices in Pakistan, with the objective of deepening understanding and examining the relationship between elements of organizational culture and performance.” Using regression and correlation analysis, the study found out that consistency and adaptability were some of the cultural attributes which significantly influenced management practices.

Lorraine, Dorai, and Zubair (2011) examined how organizational culture affects performance management within the insurance sector. The study focused on five variables namely adaptive perspective, communal, network, mercenary and fragmented culture. The study established a link between Corporate Cultures and management practices. However, the study reported that different types of organizational cultures had varied acceptance levels of performance management. The current study explored the effect of corporate culture from competing value framework dimensions on commercial state corporations in Kenya.

According to Tseng (2010) on the study on assessing the influence of the different types of Corporate Culture on performance have reported mixed findings. Tseng (2010) reported significant positive influence of adhocracy and hierarchical cultures on performance. Similar results were obtained by Calciolari, Prenestini, and Lega (2018). However, Fekete and Bocskei (2011) established that clan and adhocracy cultures were significant positive predictors of performance. Their findings indicate that a hierarchical culture negatively affects financial performance. Zhang and Zhu (2012) found contrary evidence with regard to hierarchical culture, but reported significant positive impact of both adhocracy and market cultures on performance. Morgan and Vorhies (2018) support the indirect positive link between market culture and market performance through customer satisfaction. They further note that market culture positively impacts financial performance directly, while also exerting an indirect effect through innovation practices. In consistent with Choi et al. (2010), who argue that all types of culture are important predictors of performance, Chatman et *al.* (2014) conclude that all the four types of Corporate Culture based on CVF has significant positive influence on performance.

A study conducted by Mehta and Krishnan's (2020) study found that successful companies have strong cultures that empower employees, emphasize on team orientation, and have a clear strategic direction. This brings the whole organization together in the pursuit of a shared objective. However, strong cultures may also hinder strategy implementation if the values embraced by members' conflict with those outlined in the new strategy. They are also very difficult to change, which can make the implementation process slow and costly (Robbins, Judge & Campbell, 2014). Weak cultures lead to a lack of commitment to the strategy implementation process as they provide little or no strategy implementation assistance that management can use as levers to mobilize commitment to executing the chosen strategy (Hiriyappa, 2013).

The study by Joseph and Kibera (2019) aimed at determining the influence of organizational culture on the performance of microfinance institutions in Kenya. The study employed "a descriptive cross-sectional survey design." "Secondary data were sourced from annual reports of the Association of Microfinance Institutions in Kenya and Microfinance Rating Africa, while primary data were obtained through structured questionnaires administered to chief executive officers, human resource managers, and marketing managers." Data analysis was conducted using factor analysis and hierarchical regression. Findings revealed that clan and hierarchical cultures were the predominant cultural types in the microfinance sector. The results further showed that organizational culture significantly affected non-market performance, whereas market culture had a negative relationship with the debt-to-equity ratio. The study concluded that organizational culture serves as a key driver of sustainable competitive advantage in the microfinance industry, and that market culture fosters financial independence and long-term sustainability. Recent studies have confirmed similar findings in other sectors, showing that adaptive cultures drive innovation, service quality, and long-term sustainability in both private and public organizations (Alharbi, 2021; Ahmed & Shafiq, 2022). The current study extends this line of inquiry by assessing the relationship between corporate culture and performance of commercial state corporations in Kenya, where organizational values and practices remain critical to enhancing efficiency and accountability (Shakil, 2022; Mensah & Boateng, 2024).

A study by Owino and Kibera (2019) sought to establish the influence of Corporate Culture on the performance of microfinance institutions in Kenya. The study "utilized a descriptive cross-sectional survey design. Secondary data were drawn from annual reports by the Association of Microfinance Institutions in Kenya and Microfinance Rating Africa, while primary data were collected through structured questionnaires administered to chief executive officers, human resource managers, and marketing managers." Data analysis involved factor analysis and hierarchical regression. The findings revealed that clan and hierarchical cultures were the most prevalent cultural forms within the microfinance sector. Results further indicated that corporate culture significantly influenced non-market performance, while market culture showed a negative relationship with the debt-to-equity ratio. According to Owino and Francis (2019), corporate culture represents a key source of sustainable competitive advantage in the microfinance industry, with market culture contributing to financial independence and long-term sustainability. Building on this, the present study examined the impact of corporate culture on the performance of commercial state corporations in Kenya.

The research conducted by Maina (2016) aimed to investigate the connection between corporate culture and organizational performance within commercial banks in Kenya. “The research employed a descriptive survey design, with the target population consisting of 42 commercial banks in Nairobi County.” The study sample was selected through stratified random sampling techniques, with 120 respondents participating. Data were gathered through the use of a questionnaire. The study concluded that commercial banks had corporate cultures that determined how things were done, employees were like-minded and held similar beliefs and values, banks were guided by values of consistency, adaptability, and effective communication systems, and employees developed a sense of belonging, which enhanced their dedication to their work. Furthermore, commercial banks had clearly defined work ethics. The results revealed a significant positive association between corporate culture and organizational performance among commercial banks in Kenya. Recent studies have reinforced these findings by showing that cultural alignment positively influences employee engagement, innovation, and long-term organizational success (Alharbi, 2021; Ghosh & Srivastava, 2023). The current study builds on this evidence by investigating the effect of corporate culture on the performance of commercial state corporations in Kenya, where culture remains central to strengthening efficiency, accountability, and service delivery (Kimani & Omondi, 2022; Mensah & Boateng, 2024).

2.2.2 Corporate culture, Innovation practice and organisational performance

The study by Umair and Dilanchiev (2022) examined the mediating role of financing and organizational culture on the relationship between total quality management (TQM) and performance in small and medium-sized enterprises (SMEs) in China and Vietnam. The research focused on how company culture affects the efficiency of the relationship between TQM and SME performance. Information was collected using a self-administered survey targeting SME managers and shareholders in China’s central region. The study revealed that TQM and organizational culture directly influence SME success, demonstrating that TQM has a strong positive effect on organizational performance. Similar evidence has been reported in other contexts, where corporate culture has been shown to amplify the impact of management practices on business outcomes (Alharbi, 2021; Ahmed & Shafiq, 2022).

A case study of a small firm was explored using a statistical cross-sectional research approach, with the authors recommending that future studies utilize both qualitative and quantitative methodologies for broader insights. The findings showed that although TQM significantly influences SME performance, it also plays a key role in shaping the organization's mission. Additionally, financing and organizational culture were identified as important mediators in the link between TQM and performance. This is consistent with recent findings that highlight the role of culture and resource alignment in facilitating innovation and improving efficiency across organizations (Ghosh & Srivastava, 2023; Zhang & Li, 2025).

The results, however, were limited in scope since data were only gathered in Asia, restricting their generalizability to other regions or sectors, especially outside the manufacturing industry. Contextual studies from Africa suggest that innovation and organizational culture mediate performance outcomes differently due to institutional and regulatory variations (Mutinda & Ngugi, 2022; Mensah & Boateng, 2024). The current study therefore extends this discourse by assessing the mediating role of innovation practice on the relationship between corporate culture and performance of commercial state corporations in Kenya, where innovation is increasingly recognized as a strategic driver of public-sector efficiency (Kimani & Omondi, 2022; Wanyama, 2021).

A study by Kiarie and Lewa (2019) sought to establish the effect of innovation practices on organizational performance in health insurance service providers in Kenya. "The study's specific objectives were to determine the impact of process innovation and market innovation on performance in health insurance firms." The study employed a descriptive research design, targeting 224 managers from health insurance providers, with a stratified sampling method to create the research sample. Questionnaires with close-ended items were administered to obtain primary data, and both descriptive and inferential statistics were applied in analysis. The study revealed that process innovation enhanced the quality of products and services, supported product innovation, and improved service delivery in insurance companies. Additionally, market innovation was found to play an essential part in meeting market demands and opening up new market opportunities. These findings align with broader evidence that innovation significantly contributes to competitive advantage and organizational adaptability (Byukusenge et al., 2016; Ghosh & Srivastava, 2023).

The study concluded that implementing process and market innovation positively influences organizational performance in health insurance providers in Kenya. It recommended that strategic innovations should be encouraged and that firms continuously seek superior processes and market innovations to gain a competitive edge. However, the study also noted that innovation strategies alone are not sufficient to sustain long-term competitiveness; investments in research and development are necessary to foster continuous innovation. Recent research supports this view, emphasizing that sustained performance requires an integrated approach where innovation is complemented by supportive culture, leadership, and institutional frameworks (Zhang & Li, 2025; Mensah & Boateng, 2024). The current study "expands on this debate by examining the mediating function of innovation practices in the link between corporate culture and performance of commercial state corporations in Kenya." Innovation is increasingly recognized as a strategic lever in the public sector, where process and market innovations have been shown to enhance efficiency, accountability, and responsiveness to citizens' needs (Kimani & Omondi, 2022; Wanyama, 2021).

A study by Riungu and Munene (2020) examined the direct impact of strategic innovation practices on organizational performance at Kenya Commercial Bank (KCB). Specifically, it explored the effects of core competence, customer involvement, and organizational readiness on performance. A descriptive correlational research design was employed, targeting 580 employees at KCB's headquarters, with 231 respondents selected through stratified random sampling. Data were collected using questionnaires and interviews, "with reliability confirmed at a Cronbach's alpha of 0.7." Quantitative data were analyzed using SPSS version 22 for descriptive and inferential statistics, while hypothesis testing was conducted through multiple regression with a 5% margin of error and 95% confidence level. These methodological approaches are widely used in organizational innovation research to ensure rigor and reliability (Saunders et al., 2019; Creswell & Creswell, 2022).

The results revealed that core competence innovation practices, such as shared vision, employee skills, unique resources, and intellectual property, significantly influenced performance. Similarly, customer involvement and organizational readiness—characterized by a supportive culture, leadership, and structures for innovation—also had a positive impact. These findings echo recent evidence suggesting that organizational readiness and stakeholder engagement are critical drivers of successful innovation and performance in both private and public enterprises (Ghosh & Srivastava, 2023; Zhang & Li, 2025).

Overall, the study concluded that strategic innovation practices significantly enhance KCB's performance and recommended that management continue to strengthen these practices while exploring other performance drivers. Recent African studies support this argument, noting that strategic innovation improves adaptability and competitiveness in financial institutions and state-owned enterprises (Kimani & Omondi, 2022; Mensah & Boateng, 2024). Additionally, Riungu and Munene (2020) recommended that future research involve larger samples across other commercial banks, a point that aligns with the need for comparative studies to capture sector-wide perspectives on innovation practices (Wanyama, 2021; Mutinda & Ngugi, 2022).

In a study done by Nikpour (2017), the aim was to examine the mediating effect of employee organizational commitment in the link between organizational culture and organizational performance. The study used a descriptive and correlational research design, as well as the survey approach. The researchers population included all personnel within the education office of Kerman province, with a sample size of 190 individuals determined using Cochran's method. "Data collection instruments measured organizational culture, organizational commitment, and organizational performance, and Inferential and descriptive statistics were used to analyze the data, specifically structural equation modeling through route analysis with SPSS and AMOS software." Such methodological approaches are commonly applied in contemporary organizational research to assess complex mediating and moderating relationships (Saunders et al., 2019; Hayes, 2022).

The research findings revealed that the proposed model demonstrated a suitable level of fit and that organizational culture had a broader influence beyond its direct impact. This influence on organizational performance was mediated by the level of employees' organizational commitment, with the extent of the indirect impact found to be significantly greater than the direct effect. Recent studies have confirmed these findings, showing that employee commitment and engagement often serve as critical mediators that translate organizational culture into improved performance outcomes (Alharbi, 2021; Ghosh & Srivastava, 2023). The current study expands this line of inquiry by examining the mediating role of innovation practice on the relationship between corporate culture and performance of commercial state corporations in Kenya, where innovation is increasingly recognized as a key mechanism linking organizational values to performance (Kimani & Omondi, 2022; Mensah & Boateng, 2024).

In their study, Sinha and Dhall (2020) investigated the correlation between organizational culture, total quality management (TQM), and organizational performance within the specific context of small and medium enterprises (SMEs) in the Indian auto component industry. Data collection was conducted using surveys administered to Quality Heads of SMEs who were members of the Indian Automobile Component Manufacturers Association. The goodness-of-fit and parameter estimation statistics were used to evaluate the conceptual model. Measures within the framework of structural equation modeling (SEM), applying AMOS 18.0. Such analytical approaches have become increasingly common in management research because of their ability to assess complex causal and mediating relationships (Hayes, 2022; Creswell & Creswell, 2022). "The findings verified the suggested model's validity, demonstrating that while there is no statistically significant direct impact of organizational culture on performance, culture has a positive and statistically significant influence on TQM interventions." Furthermore, TQM interventions were found to have a favorable and significant impact on performance, with TQM playing an important mediating function between culture and performance. Recent studies similarly highlight that quality management practices often act as mediators, strengthening the culture–performance link in diverse industries (Alharbi, 2021; Ahmed & Shafiq, 2022).

The findings of Sinha and Dhall (2020) provided valuable insights for SMEs in the Indian auto component industry, enabling them to align TQM initiatives with organizational culture for improved performance outcomes and global competitiveness. Evidence from more recent research shows that innovation and TQM alignment with culture also enhances competitiveness in public enterprises and state corporations, particularly in emerging economies where efficiency and accountability are critical (Ghosh & Srivastava, 2023; Mensah & Boateng, 2024). The current study contributes to this growing discourse by examining the mediating role of innovation practice in the relationship between corporate culture and performance of commercial state corporations in Kenya, where innovation has become a central pillar for sustainable public sector reform (Kimani & Omondi, 2022; Wanyama, 2021).

In their study, Shuaib, He, and Song (2021) investigated dynamic capacities' mediation influence on the relationship between organizational culture, quality management, and innovation across Nigerian manufacturing firms. The research gathered empirical data from a sample of 400 manufacturing enterprises registered with the Manufacturers Association of Nigeria that employed quality management techniques. The sampling strategy adopted was convenience sampling, and data analysis was conducted using a partial least squares (PLS) model. PLS approaches have gained traction in organizational research because of their robustness in estimating relationships in complex models with mediators and latent constructs (Hair et al., 2021; Hayes, 2022).

The findings indicated a favorable and significant relationship between all elements of organizational culture and quality management practices with innovation. Moreover, dynamic capabilities were found to play a constructive and substantial mediating role, linking organizational culture and quality management practices to innovation outcomes. These results resonate with broader evidence suggesting that organizational culture and capabilities act as enablers of innovation across diverse sectors, including public enterprises (Ghosh & Srivastava, 2023; Zhang & Li, 2025).

The current study expands on this debate by investigating the mediating function of innovation practice in the relationship between corporate culture and performance of commercial state enterprises in Kenya. This is especially relevant given that innovation is increasingly recognized as a strategic pathway for enhancing accountability, efficiency, and competitiveness in state-owned enterprises in Africa (Kimani & Omondi, 2022; Mensah & Boateng, 2024).
Existing research conducted by Byukusenge, Munene, and Orobia (2016) investigated the role that innovation plays as a moderator in the connection between knowledge management and the economic performance of small and medium-sized enterprises (SMEs) in Rwanda. To acquire the data necessary for the mediation test, A cross-sectional survey design and quantitative

methodology were used. The study indicated that innovative thinking has a favorable and considerable impact on corporate performance.. However, there was no direct influence of knowledge management on firm performance unless innovation was considered as a complete mediator. These results underscore the central role of innovation in translating knowledge resources into tangible performance outcomes (Ghosh & Srivastava, 2023; Zhang & Li, 2025).

This suggests that Rwandan SMEs would not be able to achieve improved business performance without embedding innovation into their operations. The study contributed to knowledge management literature by highlighting how innovation enhances business performance through the development of new products, processes, and markets. This aligns with recent evidence showing that innovation remains a critical enabler of competitiveness and adaptability across both private and public organizations in Africa (Mensah & Boateng, 2024; Kimani & Omondi, 2022).

The study was, however, limited by its use of a cross-sectional design, which restricted causal inference, and by its narrow focus on SMEs within Rwanda. Similar limitations have been highlighted in other innovation studies, with scholars calling for longitudinal approaches to better capture dynamic effects (Saunders et al., 2019; Creswell & Creswell, 2022). The current study builds on this stream of research by examining the mediating role of innovation practice on the relationship between corporate culture and performance of commercial state corporations in Kenya, where innovation has become integral to achieving accountability, efficiency, and sustainability in service delivery (Wanyama, 2021; Mutinda & Ngugi, 2022).

A study was conducted in 2014 by Waringa Wanjiku to determine “the relationship between innovation practice and performance of micro and small enterprises (MSEs) in Kiambu Town, Kenya.” The study used a descriptive research approach to evaluate the connection between innovation practice and MSE performance. The target population comprised licensed MSEs in Kiambu Town, and data were collected through a researcher-developed questionnaire containing both open- and closed-ended items. Methodological choices such as descriptive surveys remain common in enterprise performance research, particularly for capturing a broad range of responses from SMEs and MSEs (Saunders et al., 2019; Creswell & Creswell, 2022).

The study found that process, product, positioning, and paradigm innovation practices were positively associated with the performance of some business types within MSEs in Kiambu Town. It concluded that enterprises should embrace innovation practices based on research identifying the most suitable forms for their specific sectors. These findings are consistent with more recent studies showing that different types of innovation practices—particularly product and process innovations—are critical to driving organizational competitiveness and long-term sustainability (Ghosh & Srivastava, 2023; Zhang & Li, 2025).

The study further proposed several policy considerations, including the implementation of tax incentives to spur innovation practices, involvement of key stakeholders such as academia in R&D, the development of policies that encourage innovation, recognition and rewarding of innovative enterprises, the creation of programs that nurture innovators, and greater financial support from banks and other stakeholders for viable innovative ideas. Similar recommendations have been echoed in recent African studies emphasizing the importance of institutional support, funding mechanisms, and policy frameworks for fostering innovation in both SMEs and state-owned enterprises (Mensah & Boateng, 2024; Kimani & Omondi, 2022).

The current study extends these insights by examining the mediating role of innovation practice in the relationship between corporate culture and performance of commercial state corporations in Kenya. In this context, innovation is not only a driver of efficiency and competitiveness but also a mechanism for enhancing accountability and responsiveness to public service demands (Wanyama, 2021; Mutinda & Ngugi, 2022).

In their study, Omondi, Rotich, Katuse, and Senaji (2017) examined the correlation between organizational structure and performance within the commercial banking sector in Kenya. The researchers also explored the potential mediating influence of innovation in this connection. The study adopted a social survey approach, using questionnaires as the primary instrument for data collection. The data were subjected to quantitative analysis, applying both descriptive and inferential statistical methods. Similar methodological approaches are widely employed in organizational studies because they provide robust evidence of structural and innovation-related effects on performance (Saunders et al., 2019; Creswell & Creswell, 2022).

The study sought to “assess how strategic knowledge competence influences the performance of commercial banks in Kenya. Questionnaires were administered to Chief Executive Officers of all 43 banks through a drop-and-pick-later approach. Data analysis involved the use of descriptive statistics, Analysis of Variance (ANOVA), and regression techniques.” The results revealed that organizational structure had no statistically significant effect on innovation or performance in Kenya’s commercial banking industry. These results align with emerging scholarship suggesting that organizational structure by itself may not always directly drive innovation, but that its effects depend on complementary factors such as leadership style, culture, and institutional environment (Alharbi, 2021; Ghosh & Srivastava, 2023).

The current study extends these insights by examining the mediating role of innovation practice regarding the link between corporate culture and the performance of commercial state corporations in Kenya. Innovation is increasingly recognized as a mediating mechanism that translates organizational resources and structures into performance outcomes, particularly in public-sector organizations that must balance efficiency with accountability (Mensah & Boateng, 2024; Kimani & Omondi, 2022).

2.2.3 Corporate culture, regulatory framework and organisational performance

In a study conducted in 2019, Elizabeth Mohammed examined, “the effect of government regulations on the performance of small and medium-sized enterprises (SMEs) in the automobile sector parts industry within Nairobi, Kenya.” The study’s specific objectives included identifying the taxation policies impacting automobile operators in Nairobi’s Central Business District (CBD), evaluating the effects of licensing processes on these operators, and examining the import and export regulations affecting their operations. A descriptive survey design was employed, utilizing a sample survey approach where data were obtained using self-administered questionnaires. The study targeted a population of 600 small-scale automobile dealers in Nairobi’s CBD, from which a stratified random sample of 60 respondents was selected. Descriptive surveys remain widely used in policy and regulatory research for capturing perceptions of compliance and institutional impacts on business performance (Saunders et al., 2019; Creswell & Creswell, 2022).

Findings revealed that 76.6% of respondents were familiar with tax administration, and the integration of tax systems significantly influenced SME operations, with 65% of respondents reporting adverse effects. Additionally, licensing procedures and regulations were found to hinder business operations, as indicated by 76.6% of respondents. Notably, 90% of participants stated that businesses without a single license were not permitted to operate within Nairobi. These findings are consistent with broader evidence across Africa that taxation, licensing, and regulatory burdens significantly constrain SME growth and competitiveness (Oluoch et al., 2021; Wanyama, 2021).

The study concluded that government regulations posed challenges to the growth of SMEs in Nairobi, with a significant and positive relationship observed in the automobile parts sector within the CBD. It highlighted that the multiplicity of licensing requirements hindered SME growth and undermined business sustainability. Similar studies have emphasized the need for streamlined regulatory frameworks to foster enterprise development, improve compliance efficiency, and enhance competitiveness (Kimani & Omondi, 2022; Mensah & Boateng, 2024). Recommendations included that the government manage compliance and non-compliance costs associated with business permits to facilitate smoother SME operations, and that taxation policies affecting SME growth in Nairobi be reviewed and evaluated. Recent policy analyses confirm that regulatory reforms, particularly in licensing and taxation, are essential to enable SMEs and state-owned enterprises to thrive in Kenya’s evolving economic landscape (Mutinda & Ngugi, 2022; Ghosh & Srivastava, 2023).

The study by Karungani and Ochiri (2020) examined the effect of policy and regulatory framework on organizational performance, focusing on the case of Nairobi County. “The research employed a quantitative research design with a survey strategy. A purposive sampling approach was applied to select 87 employees from the procurement department of the Nairobi County Government.” Data were gathered using questionnaires and analyzed through descriptive and regression analysis methods. Quantitative survey approaches remain widely applied in public sector governance research as they provide insights into the influence of institutional frameworks on organizational outcomes (Saunders et al., 2019; Creswell & Creswell, 2022).

The study's findings showed that the policy and regulatory framework in the procurement sector is vital for enhancing organizational performance. In particular, the results indicated that regulatory mechanisms help establish fair competition among organizations involved in procurement activities, thereby enhancing organizational outcomes. Similar evidence has shown that effective regulatory frameworks are critical for ensuring competitiveness, compliance, and efficiency in both public and private sector institutions (Oluoch et al., 2021; Mensah & Boateng, 2024).

Additionally, the research indicated that the policy and regulatory framework enhanced transparency, accountability, ethical conduct, and fairness, and decision-making processes. This aligns with other Kenyan and African studies that have emphasized the positive role of regulatory oversight in strengthening accountability and ethical governance (Kimani & Omondi, 2022; Wanyama, 2021). However, it is also noted in recent literature that overly rigid or poorly implemented regulations can impede innovation and reduce efficiency, highlighting the need for balance between oversight and flexibility (Mutinda & Ngugi, 2022; Ghosh & Srivastava, 2023).

The study by Ibrahim, Mahmood, and Bakar (2018) explored the link between strategic improvisation and higher education institutions' performance, with corporate culture as a moderating factor. A total of 229 questionnaires were completed and returned by academic leaders from higher education institutions in Kano State, Nigeria. The study applied partial least squares (PLS) path modeling to test the proposed hypotheses. PLS modeling is increasingly used in management and organizational research because of its robustness in handling complex models with mediating and moderating variables (Hair et al., 2021; Hayes, 2022).

The findings indicated that both strategic improvisation and corporate culture dimensions had a direct relationship with institutional performance. However, "only innovative culture significantly moderated the relationship between strategic improvisation and performance, while bureaucratic and supportive cultures did not support the proposed hypothesis." This aligns with recent research showing that innovative and adaptive cultures are more effective in enabling organizations to respond to environmental uncertainty and enhance performance outcomes (Alharbi, 2021; Ghosh & Srivastava, 2023).

The authors recommended further studies to validate the impact of strategic improvisation on public sector performance and highlighted the need for longitudinal approaches to establish the stages at which strategic improvisation exerts greater influence. Recent African scholarship also underscores the importance of institutional context, noting that regulatory environments can either strengthen or weaken the culture–performance relationship depending on the level of flexibility and supportiveness embedded in governance frameworks (Mensah & Boateng, 2024; Kimani & Omondi, 2022). The current study contributes to this body of knowledge by assessing the moderating role of the regulatory framework on the relationship between corporate culture and performance of commercial state corporations in Kenya, where regulatory oversight and governance reforms are crucial for public sector accountability and efficiency (Wanyama, 2021; Mutinda & Ngugi, 2022).

The extant study by Arokodare, Asikhia, and Makinde (2020) investigated the relationship between information technology capability and market share, as well as the moderating effect of organizational culture on the relationship between information technology capability and performance of oil and gas marketing companies in Lagos State, Nigeria. “The study employed a survey research design, targeting 515 oil and gas marketing and retail outlets in Lagos State, with a total enumeration approach adopted for data collection.” Survey designs are widely used in organizational and technology research to establish relational patterns and moderation effects between organizational resources and performance outcomes (Saunders et al., 2019; Creswell & Creswell, 2022).

The findings revealed “there was a strong positive correlation between information technology capability and market share.” Additionally, organizational culture had a significant moderating effect on this relationship, indicating that cultural flexibility strengthens the performance outcomes of technology investments. These results are consistent with recent studies highlighting that cultural adaptability enhances the effectiveness of digital technologies and innovation initiatives across organizations (Ghosh & Srivastava, 2023; Zhang & Li, 2025).

The study concluded that IT capability is strongly linked to market share and that organizational culture serves as an important moderating factor in this connection. It recommended that oil and gas marketing firms develop flexible business models that promote the adoption of information technology, and cultural flexibility to achieve competitive advantage. Similar arguments have been made in public-sector contexts, where governance reforms and regulatory flexibility are viewed as essential enablers for leveraging technology and organizational culture to improve performance (Mensah & Boateng, 2024; Kimani & Omondi, 2022). The current study builds on this line of research by assessing the moderating role of the regulatory framework on the relationship between corporate culture and performance of commercial state corporations in Kenya, recognizing that supportive regulation is key to unlocking innovation-driven performance improvements (Wanyama, 2021; Mutinda & Ngugi, 2022).

The study by Oketch, Kilika, and Kinyua (2020) examined the moderating effect of the legal environment on the relationship between top management team characteristics and organizational performance of independent regulatory agencies in Kenya. "To accomplish this goal, the study employed a descriptive cross-sectional research design. Cross-sectional designs are widely applied in organizational performance research due to their suitability in examining relationships at a single point in time, especially within public sector contexts (Saunders et al., 2019; Creswell & Creswell, 2022)." The target population comprised all 23 state regulatory agencies currently existing in Kenya (State Corporations Advisory Committee, 2023). Recognizing the uniqueness of each agency and the specific roles of top management team members, the study conducted a census survey involving all team members from the 23 agencies to obtain comprehensive data. "Primary data were gathered using structured questionnaires administered through a drop-and-pick approach and analyzed using descriptive statistics (percentages, frequencies, means, and standard deviations) used for initial data summarization." The Whisman and McClelland moderation model was applied to test the hypothesized moderating effects, aligning with best practices in testing interaction effects in management research (Hayes, 2022).

The findings revealed that, "the legal environment was found to significantly moderate the influence of top management team characteristics on the organizational performance of independent regulatory agencies. This aligns with emerging evidence that regulatory environments can either constrain or enhance organizational leadership effectiveness and governance performance in state entities (Ngugi & Mutinda, 2022; Mensah & Boateng, 2024)." The study further recommended that independent regulatory agencies adopt stable funding mechanisms to reduce overreliance on parent ministries or exchequer allocations, thereby ensuring financial independence in executing their mandates. This perspective echoes broader calls for strengthening institutional autonomy and regulatory capacity in African governance systems (Omondi & Waiganjo, 2023; Ghosh & Srivastava, 2023). The current study extends this discourse "by assessing the regulatory framework serves as a moderator in the relationship between corporate culture and the performance of commercial state corporations in Kenya." In this regard, examining how legal and regulatory frameworks shape organizational outcomes is critical for balancing efficiency, accountability, and sustainability in state corporations (Kimani & Omondi, 2022; Zhang & Li, 2025).

A study by Odero, Egessa, and Oseno (2019) explored the moderating effect of legal considerations on the link between strategic leadership practices and the performance of Deposit Taking SACCOS (DTS) in Kenya. The study adopted a descriptive correlational design, which is widely applied in governance and management studies for testing hypothesized relationships among variables at a specific point in time (Saunders et al., 2019; Creswell & Creswell, 2022). The research population comprised 42 DTS in Nairobi County, targeting 168 respondents. Data was collected through closed-ended questionnaires administered to 126 top managers and interviews with 12 randomly selected CEOs, ensuring both quantitative and qualitative insights. Analytical methods included Pearson's product moment correlation, hierarchical multiple regression, and content analysis.

The findings revealed that legal variables significantly moderated the association between strategic leadership practices and DTS performance in Kenya. Specifically, adherence to legal frameworks shaped how leadership practices translated into organizational outcomes, highlighting the importance of compliance in cooperative financial institutions. These results resonate with more recent scholarship emphasizing that legal and regulatory frameworks directly influence leadership effectiveness and organizational sustainability, especially in financial and cooperative sectors across Africa (Mensah & Boateng, 2024; Omondi & Waiganjo, 2023).

The study concluded that strategic leaders must incorporate an awareness of legal and regulatory considerations into their decision-making to enhance organizational performance. This conclusion is supported by contemporary literature suggesting that effective leaders integrate regulatory compliance with strategy to mitigate risks and foster resilience in volatile environments (Hayes, 2022; Zhang & Li, 2025).

Building on earlier findings, “the present study investigates the moderating effect of the regulatory framework on the link between corporate culture and the performance of commercial state corporations in Kenya.” Given that state corporations often balance dual mandates of profitability and public accountability, understanding how legal frameworks shape culture-performance linkages is essential for reform and governance improvements (Kimani & Omondi, 2022; Ghosh & Srivastava, 2023).

2.2.4 Corporate culture, Innovation practice, regulatory framework and organisational performance

Shea, Usman, Arivalagan, and Parayitam (2023) conducted an empirical investigation into “the moderating role of knowledge management (KM) practices in the relationship between corporate culture and organizational performance within Indian information technology firms.” The study focused on the influence of four cultural types—cooperative, innovative, consistent, and effectiveness-oriented cultures—on performance. Beyond assessing direct effects, particular attention was given to how KM practices strengthen the culture–performance relationship. “Data were collected using a rigorously developed survey instrument administered to 1,255 respondents across 10 IT companies in India.” Following verification of the instrument’s psychometric validity and reliability, hierarchical regression analysis was applied to test the proposed hypotheses.

The results indicated that, ”cooperative, innovative, consistent, and effectiveness-oriented cultures were all positively and significantly linked to organizational performance.” Furthermore, knowledge management (KM) practices not only had a direct positive impact on performance but also significantly moderated the relationship between the different cultural dimensions and organizational performance. These findings align with contemporary evidence emphasizing that KM practices serve as strategic resources that enable organizations to leverage their cultural strengths for improved performance (Alavi et al., 2022; Ghosh & Srivastava, 2023). Moreover, the study resonates with recent scholarship that highlights the synergy between innovation-oriented cultures and effective knowledge systems in enhancing adaptability, competitiveness, and sustainable performance outcomes (Mensah & Boateng, 2024; Zhang & Li, 2025).

A study by Shafique, Anam, and Naveed (2019) examined the mediating effect of innovative culture and organizational learning on the relationship between leadership styles and organizational performance in Malaysian SMEs. Data were collected through questionnaires distributed to SME owners and managers, with 950 questionnaires sent via postal and email strategies. Of these, 409 were returned, and after eliminating 25 with missing values, 384 valid responses were analyzed. The findings revealed that leadership styles had a significant influence on organizational learning, innovative culture, and organizational performance. Furthermore, both innovative culture and organizational learning were found to have significant direct effects on performance, as well as mediating effects on the relationship between leadership styles and organizational performance.

This study highlights the critical role of innovation-oriented culture and learning systems in translating leadership practices into enhanced performance outcomes. Recent studies support this by showing that innovation-driven cultures foster adaptability and resilience, particularly in dynamic SME environments (Alavi et al., 2022; Mensah & Boateng, 2024). Similarly, organizational learning has been shown to function as a strategic mediator in leadership–performance models, facilitating knowledge transfer and continuous improvement (Hayes, 2022; Zhang & Li, 2025).

The current research advances the literature, "by assessing the combined moderated and mediated influence of regulatory frameworks and innovation practices on the link between corporate culture and performance in Kenyan commercial state corporations." In contexts such as Kenya, where public enterprises operate under both performance and accountability pressures, regulatory systems and innovation practices play a pivotal role in shaping how leadership and culture translate into measurable outcomes (Kimani & Omondi, 2022; Omondi & Waiganjo, 2023).

The extant study by Anoud and Wan (2021) examined "how corporate culture mediates the capacity for innovation practice and organizational performance in the UAE Department of Economic Development. A literature review approach was employed to assemble relevant data." The study highlighted that previous research used diverse approaches to categorize corporate performance and, through synthesis, identified key innovation practice factors such as vision and strategy, organizational intelligence, creativity and idea management, technology management, and organizational structure and systems. The findings emphasized that corporate culture serves as a mediating force that shapes how innovation practices translate into enhanced organizational performance.

These insights align with more recent scholarship, which underscores that organizational culture and innovation capabilities must be harmonized for sustainable performance outcomes in both public and private sector organizations (Ghosh & Srivastava, 2023; Mensah & Boateng, 2024). Furthermore, evidence suggests that culture not only provides the values and norms that facilitate innovation but also conditions the effectiveness of innovation systems such as knowledge management and technology adoption (Hayes, 2022; Zhang & Li, 2025).

Unlike the Anoud and Wan (2021) study, which applied a desktop literature review, the current study employs a quantitative research methodology using questionnaires to capture organizational data directly from respondents. This approach enables the empirical examination of how regulatory frameworks and innovation practices jointly moderate and mediate the relationship between corporate culture and the performance of commercial state corporations in Kenya. Such an extension is particularly relevant in African contexts, where regulatory environments strongly shape the interplay between innovation capacity and organizational performance (Kimani & Omondi, 2022; Omondi & Waiganjo, 2023).

According to Riany (2021), a study was conducted to establish the influence of organizational structure on the performance of state corporations in Kenya. The research conceptualized organizational structure as influencing the performance of state corporations, with structure as the independent variable and performance as the dependent variable.. It reviewed the Contingency Theory and New Public Management (NPM) theory as theoretical anchors, both of which highlight the importance of aligning organizational design and managerial practices with external and internal conditions for improved performance (Donaldson, 2021; Hood, 2022). An empirical review was also undertaken to situate the study within existing scholarship, identifying relevant works, authors, areas of investigation, and key findings.

The study "employed a descriptive research design with an exploratory approach, gathering data from 189 state corporations in Kenya. The state corporations served as the unit of analysis, while the Heads of Human Resources within each corporation were the units of observation. A stratified sampling technique was used to select a sample of 96 state corporations, and data were collected through self-administered questionnaires, complemented by documentary reviews." The sample size of 95 HR respondents was determined using Cochran's (1977) formula. Data were analyzed using both descriptive and inferential statistics with SPSS Version 26.

Findings revealed a significant positive relationship between organizational structure and the performance of state corporations in Kenya. Specifically, aspects such as concentration of authority, degree of bureaucracy, and span of management were found to be critical determinants of organizational performance. These findings are consistent with recent studies that highlight how streamlined structures enhance efficiency, accountability, and service delivery in public enterprises (Mensah & Boateng, 2024; Omondi & Waiganjo, 2023). Similarly, other scholars emphasize that organizational agility and structural flexibility are crucial for enabling innovation and sustaining performance in dynamic environments (Ghosh & Srivastava, 2023; Zhang & Li, 2025).

In 2022, Joseph et al. "investigated how the external environment and strategy execution jointly moderated and mediated the relationship between strategic leadership and organizational performance in Kenyan agricultural, livestock, and fisheries (ALF) parastatals." The study was anchored on the Full Range Leadership Theory, Cultural Dimensions Theory, Open Systems Theory, and the Resource-Based View (RBV) theory, which together provide a comprehensive framework for understanding leadership, environmental dynamics, and performance outcomes (Northouse, 2021; Barney, 2022). "A cross-sectional survey using a census approach was conducted, targeting 45 CEOs and 135 senior managers across the 45 ALF parastatals. Data were gathered through structured questionnaires and analyzed using descriptive and inferential statistics, including correlation analysis, multiple regression, and bootstrapping techniques."

These statistical approaches are widely recommended for testing moderated mediation models in management and leadership research (Hayes, 2022; Hair et al., 2021).

The results revealed, “a strong positive relationship between strategic leadership, the external environment, strategy execution, and organizational performance. Bootstrapping analysis further supported the presence of a moderated mediation effect, as the confidence intervals for the index did not include zero, aligning with established practices for testing mediation and moderation (Hayes, 2022; Hair et al., 2021).” The findings indicated that strategic leadership styles directly and positively impacted organizational performance, with the external environment serving as a significant moderator. Additionally, strategy execution mediated the relationship between leadership and performance, and the strength of this mediation varied according to environmental conditions. These findings align with contemporary evidence that emphasizes how environmental dynamics and governance structures shape the effectiveness of leadership and strategic outcomes in public organizations (Mensah & Boateng, 2024; Omondi & Waiganjo, 2023). Similarly, recent research underscores that external environmental turbulence and regulatory pressures influence how leaders deploy strategies, thereby affecting performance trajectories across African state-owned enterprises (Ghosh & Srivastava, 2023; Zhang & Li, 2025).The present research aligns with this logic by examining how regulatory frameworks and innovation practices function as variables that simultaneously moderate and mediate the relationship between corporate culture and the performance of commercial state corporations in Kenya. This approach is particularly relevant given that regulatory pressures and innovation dynamics simultaneously constrain and enable performance in state-owned enterprises (Kimani & Omondi, 2022; Zhang & Li, 2025).

The study by Oluoch, K’Alol, and Koshal (2021) investigated the moderating influence of the regulatory framework on the relationship between strategic leadership and financial sustainability of NGOs in Kenya. The study was anchored in strategic leadership theory and utilized a descriptive correlational research design. The target population included 6,028 active local NGOs, from which a stratified random sample of 413 CEOs and board members was drawn. Data were collected using self-administered questionnaires. Correlation analysis revealed a positive and significant relationship between strategic leadership and financial sustainability, $r(393) = 0.482$, $p \leq .05$. However, the proportional odds assumption was violated [LR $\chi^2(2) =$

8.474, $p \leq .05$], and the model showed poor fit with the moderating variable. Accordingly, the study found that the regulatory framework did not significantly moderate the relationship between strategic leadership and financial sustainability in Kenyan NGOs

The findings highlight the complexity of regulatory environments in shaping organizational outcomes. While leadership influences sustainability, external regulations may not always directly moderate this relationship, particularly in contexts where compliance regimes are fragmented or donor-driven (Kimani & Omondi, 2022; Omondi & Waiganjo, 2023). The study therefore recommended that NGOs strengthen alliances and umbrella councils to advocate for favorable regulatory frameworks that address both legislative environments and donor policies, while also diversifying funding sources to mitigate dependency risks. This recommendation aligns with recent studies emphasizing collective action and regulatory advocacy as key strategies for nonprofit resilience in Africa (Mensah & Boateng, 2024; Ghosh & Srivastava, 2023).

The study by Wanyama Wechuli (2021), determined the moderating influence of corporate governance on the relationship between organizational resources and performance of regional development authorities in Kenya. “The study was informed by resource-based theory, dynamic capabilities theory, stewardship theory, and contingency theory, and employed an explanatory research design. It was carried out across six regional development authorities covering 47 counties in Kenya. Using stratified random sampling, a sample of 118 participants was selected. Primary data were collected through structured questionnaires and interview schedules, and analyzed using descriptive and inferential statistics.” The findings indicated that organizational resources explained 42.3% of the variation in performance, with technological resources in particular showing that a one-unit change led to a 0.375-unit change in performance within the regional development authorities in Kenya. Further, “corporate governance has significant moderating influence on the relationship between organizational resources and performance of regional development authorities in Kenya.” Wanyama (2021) study revealed the impact of technology in performance of regional development authorities in Kenya which are state corporations; the current study examined the moderated mediated effect of regulatory framework and innovation practice on the relationship between corporate culture and performance of commercial state corporations in Kenya.

2.3 Summary of Research Gap

The existing studies on organizational performance are encouraging; however, more research is needed to fully understand, "the critical relationship between corporate culture and the performance of commercial state corporations, an area that has not been thoroughly examined." This study sought to, "address these gaps by investigating the effects of selected independent variables on the relationship between corporate culture and the performance of commercial state corporations in Kenya." It contributes to the literature by providing empirical evidence on how different types of corporate culture influence organizational performance. Additionally, the study examined the regulatory framework as a moderating variable and innovation practices as a mediating variable to address existing contextual, methodological, and conceptual gaps.

Table 1: Summary of Research gaps

Authors	Areas of focus	Methodology	Findings	Gaps	Gaps to be addressed
Waheed, Syed, Pervaiz and Altaf (2017)	Investigation on the postulated relationship between Corporate Culture and business performance in the banking sector in Pakistan	Using the survey method a total number of 265 questionnaires were received from middle managers. The population was drawn using stratified random sampling technique.	The study results showed that Corporate Culture has significant relationship with business performance in the banking industry in Pakistan. .	The context was the banking sector in Pakistan. Did not explore conceptual aspects of innovation practices and regulatory framework.	This study examined s the corporate culture and innovation practices on the performance of commercial state corporations in Kenya.
Owino and Kibera (2019)	The influence of Corporate Culture on the performance of microfinance institutions in Kenya	A descriptive cross-sectional survey design was adopted. Secondary data were collected	The results obtained demonstrated that Corporate Culture has a significant influence on non-market	Conceptually the study looked at the organisation culture variable was market culture. Contextually the study was on	This study adopted Involvement, Consistence, Adaptability, and Mission as corporate culture indicators.

Authors	Areas of focus	Methodology	Findings	Gaps	Gaps to be addressed
		from annual reports. Primary data were collected using structured questionnaire targeting middle managers	performance. Market culture is inversely associated with debt/equity ratio.	microfinance institutions in Kenya	Contextually the study was based on the commercial state corporations in Kenya
Nikpour (2017)	The mediating effect of employee organisational commitment in the link between organisational culture and organisational performance	The study used a descriptive and correlational research design, using the survey technique. A questionnaire was used to collect date from a sample size of 190 individuals	This influence on organisational performance was mediated by the level of employee's organisational commitment. Notably, the extent of the indirect impact was found to be significantly greater than the direct impact..	The study was based in Iran Kerman province with personnel inside the education office as the respondents. The study examined organisation culture and organisational performance	The current study was quantitative in nature and a questionnaire were used to collect data. This study examined effect of corporate culture, innovation practice and regulatory framework on performance of commercial state corporations in Kenya.
Sinha and Dhall (2020)	The correlation between organisational culture, total quality management (TQM), and organisational performance.	The data gathering process included the use of survey techniques to gather information from Quality Heads of small and medium-sized enterprises (SMEs) in the Indian	The mediating role of TQM in the relationship between organisational culture and organisational performance is statistically significant	Contextually the study was based in India on small and medium-sized enterprises (SMEs). Total quality management variable was applied as the mediator.	This study focused on Kenya commercial state corporations and the study variables are corporate culture, innovation practice, regulatory framework and performance. In this study innovation practice variable was adopted as

Authors	Areas of focus	Methodology	Findings	Gaps	Gaps to be addressed
		auto component industry			the mediating variable.
Arokodare, Asikhia and Makinde (2020)	the relationship between information technology capability and market share as well as the moderating effect of organisational culture on the relationship between information technology capability and performance of oil and gas marketing companies in Lagos State, Nigeria	The study employed survey research design. The target population comprised 515 oil and gas marketing and retail outlets operating in Lagos State, Nigeria.	organisational culture significantly moderate the relationship between information technology capability and market share of oil and gas marketing companies in Lagos State, Nigeria	The study examined the oil and gas marketing companies in Lagos State, Nigeria. The study used organisational culture as a moderating variable.	The current study focused on Kenya commercial state corporation and the study variables are strategic variables are corporate culture, innovation practice, regulatory framework and performance, where regulatory framework were adopted as moderating variable in the study.
Joseph et al., (2022)	The moderated mediated effect of external environment and strategy implementation on relationship between strategic leadership and organisation performance of agricultural, livestock and	Cross sectional survey design using a census was adopted with a target population consisting of 45 Chief executive officers and 135 senior managers from 45 ALF parastatals in	The results revealed that the direct and indirect association between external environment on strategic leadership, strategy implementation and organisation performance was significant	The study was based on agricultural, livestock and fisheries parastatals in Kenya. The study variables were external environment as the moderator, strategy implementation as a mediator and strategic leadership, and	The current study examined the moderated mediation effect of regulatory framework and innovation practice on the relationship between corporate culture and performance of commercial state corporations in Kenya.

Authors	Areas of focus	Methodology	Findings	Gaps	Gaps to be addressed
	fisheries parastatals in Kenya	Kenya		organisation performance	

2.4 Research Hypotheses

Creswell (2008) defines hypotheses as formal statements that represent the expected relationship between the independent and dependent variable. Based on the synthesis of empirical and conceptual literature, the following research null hypotheses were derived.

Ho_1: Corporate culture has no significant influence on performance of commercial state corporations in Kenya.

Ho_2: Innovation practice has no mediating role on the relationship between corporate culture and performance of commercial state corporations in Kenya.

Ho_3: Regulatory framework has no moderating role on the relationship between corporate culture and performance of commercial state corporations in Kenya.

Ho_4: There is no moderated mediation effect of regulatory framework and innovation practice on the relationship between corporate culture and performance of commercial state corporations in Kenya.

2.5 Conceptual Framework

In "Figure 1," a "conceptual model" is presented. The literature identifies gaps in the "major constructs." A direct connection runs from "corporate culture" to "performance." "Innovation practice" acts as a mediator. The "regulatory framework" modifies the relationship between culture and performance.

In this study**,** innovation practice serves as a mediating variable by explaining *how* corporate culture influences organizational performance. That is, a strong and adaptive culture promotes innovation, which in turn enhances performance outcomes. Conversely, the regulatory framework acts as a moderating variable by shaping when *or* under what conditions corporate culture has a stronger or weaker effect on performance. For instance, supportive and flexible regulations may amplify the positive impact of culture on performance, while rigid or bureaucratic regulations may constrain it.

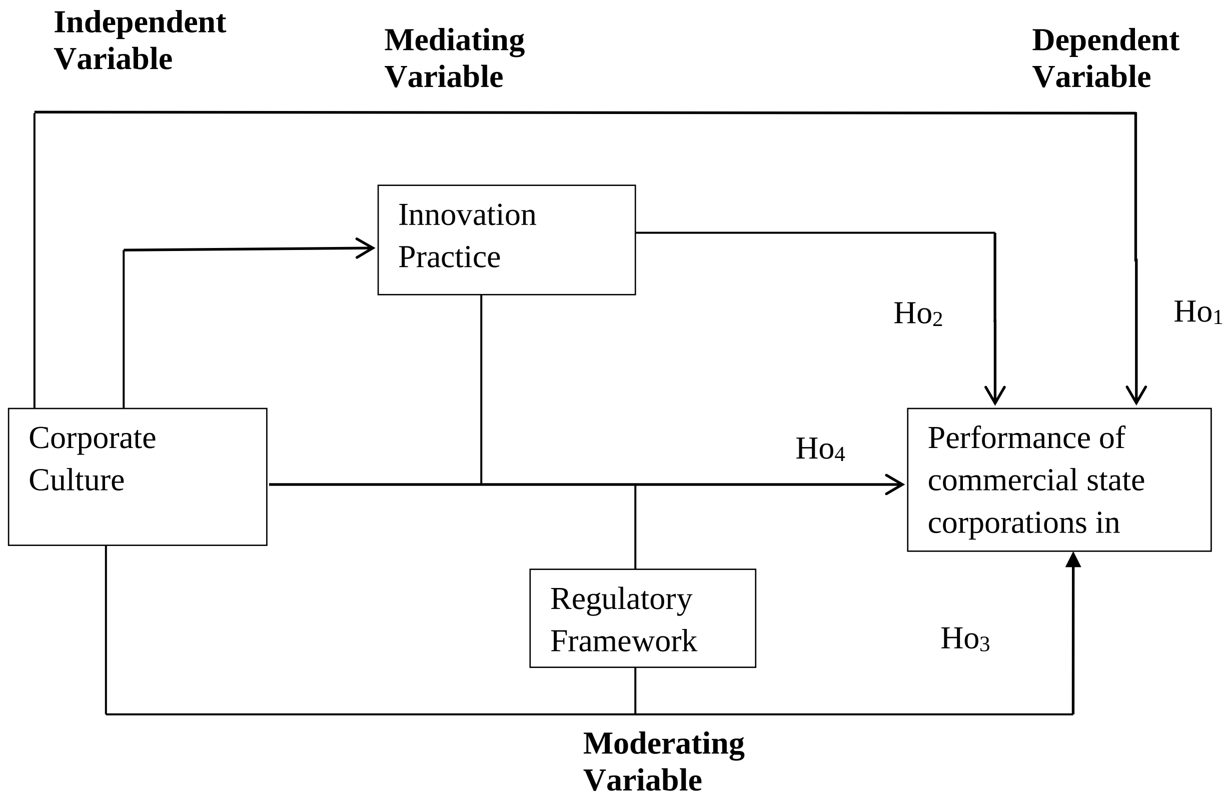


Figure 2: Conceptual framework

2.6 Operationalisation of study variables

Table 2: Operationalisation of study variables

Variable	**Indicator(s)**	**Measurement Scale**	**Questionnaire (Section& Question Number**	**Tools of Analysis**
Corporate Culture	• Involvement, Consistence, • Adaptability • Mission	5 point Likert scale	Questionnaire-Section B	Frequencies, percentages, Correlation and Multiple regression Analysis
Innovation practice	• Process innovation practice • Product innovation practice	5 point Likert scale	Questionnaire-Section C	Frequencies, percentages, Correlation and Multiple

Variable	Indicator(s)	Measurement Scale	Questionnaire (Section& Question Number	Tools of Analysis
	• Marketing innovation practice • Organisational innovation practice			regression Analysis
Regulatory Framework	• Legal framework on institutional structure • Performance monitoring • Control and transparency of operational performance	5 point Likert scale	Questionnaire-Section D	Frequencies, percentages, Correlation and Multiple regression Analysis
Performance	• Efficiency, • Effectiveness, • Organisational relevance • Financial viability,	5 point Likert scale	Questionnaire-Section E	Frequencies, percentages, Correlation and Multiple regression Analysis

2.7 Chapter summary

This chapter reviewed both theoretical and empirical literature related to the study's key constructs, with a focus on corporate culture, innovation practices, the regulatory environment, and organizational performance. Through a comprehensive empirical review and critical evaluation of existing studies, "the chapter identified several research gaps and provided a summary of knowledge deficiencies, research hypotheses, and the conceptual framework." The chapter concluded by presenting the operationalization of each variable.

CHAPTER THREE
RESEARCH METHODOLOGY

3.0 Introduction

This chapter begins with a discussion of research philosophy, focusing on the research philosophy that supports empirical research. The research philosophy guides the selection of the study design and, as a result, the approach to data analysis. This chapter also discusses in depth the research design, target population, and sampling technique utilized to answer the research questions and fulfill the study objectives. It then goes on to detail the data collection methods as well as the data analysis approach.

3.1 Research Philosophy

According to Suri (2011), research philosophy is the prototype that has the capability of reinforcing a research. A research philosophy pertains to the beliefs about how phenomena are observed, analyzed, and applied. "It is connected to epistemology, which concerns the relationship between the researcher and what is accepted as knowledge, and ontology, which relates to the nature of reality and what is considered to be true." According to Creswell and Poth (2017), what governs the selection of a relevant paradigm and methods are the research problems and research questions. In light of the understanding of research paradigms and their foundational assumptions, the reasons for selecting the research paradigm for this study are discussed below. This study followed positivist principles, which hold that reality is stable and can be seen objectively. Positivists contend that phenomena can be separated and observations can be replicated. This process entails the manipulation of reality by altering the independent variable in order to discern patterns and establish connections among the fundamental components of the social realm (Schwandt, 2014). Researchers that adhere to the positivist paradigm use a systematic approach while conducting their studies. This strategy involves the identification of a research subject, formulation of research hypotheses, and selection of an appropriate technique. Positivism facilitates the use of statistical methods for hypothesis testing and analysis of research data obtained via quantitative research methodologies.

The study adopted an experimental approach that emphasized deductive reasoning rather than inductive logic. It sought to test theories related to corporate culture, innovation practices, regulatory frameworks, and the performance of commercial state corporations in Kenya by employing scientific models to identify logical relationships among these constructs. The research applied systematic and scientifically grounded methodological procedures to ensure that the findings regarding corporate culture, innovation practices, regulatory frameworks, and performance were objective and free from bias. Anchored in deductive logic, the study developed a hypothetical model to explain the effects of corporate culture, innovation practices, and regulatory frameworks on the performance of commercial state corporations, rather than merely describing the phenomenon.

The selection of a quantitative research method was justified on two grounds. First, it facilitates the examination of relationships among variables through hypothesis testing (Koch, 2013). Accordingly, “four hypotheses were formulated to determine the existence of relationships between the independent, mediating, moderating, and dependent variables. Regression analysis was employed to test these hypotheses.”

3.2 Research Design

A research design is the program that guides the investigation of the research in collection, analysis and interpretation of observations made (Cresswell, 2014). It represents a logical framework that facilitates the drawing of inferences about causal relationships among the variables under study. Additionally, it delineates the scope of generalization to a broader population or different contexts (Mitchell & Jolley, 2012). “A research design can also be viewed as the overall structure of a study—the cohesive framework that integrates and binds together all components of the research process.”

The study employed a cross-sectional survey design, whereby data were gathered from the entire target population at one specific point in time. The selection of this design was guided by several factors. Primarily, the study aimed to determine the relationships among corporate culture, innovation practices, regulatory frameworks, and performance across all commercial state corporations in Kenya. A cross-sectional approach was appropriate because it allowed the researcher to gather data from a large number of respondents simultaneously, thereby saving time and resources compared to longitudinal designs (Setia, 2016; Saunders et al., 2019).

Second, the design was suitable for testing mediation and moderation effects using regression-based methods such as PROCESS macro, which rely on large cross-sectional datasets for robust estimation (Hayes, 2022). Third, by adopting a census of all 32 commercial state corporations, the study ensured breadth of coverage, thereby enhancing external validity and generalisability of the findings within the commercial parastatal sector.

However, it is acknowledged that the design has limitations. Specifically, the cross-sectional design limits causal inference, as data were collected at a single point in time. Consequently, the study identifies associations rather than causality. Future studies could adopt longitudinal or experimental designs to enhance and validate these findings. Nevertheless, the cross-sectional survey design was considered the most appropriate for addressing the study objectives within the available time and resource limitations

3.3 Target Population

According to Zhao, Cai, Claggett, and Wei (2013), a target population refers to the entire set of individual elements under consideration, which may be either finite or infinite. Kombo and Tromp (2009) define the target population as a grouping of persons, entities or articles from which samples are taken for measurement. The target population for this study consisted of all thirty two (32) commercial state corporations in Kenya as of 30th June 2023 (State Corporations Advisory Committee, 2023*)* as shown in Appendix I. The study employed a census approach, as the population comprised all 32 commercial state corporations.

Table 2: Commercial State Corporations

Unit of Analysis (Commercial State Corporations)	Respondent Categories (per Corporation)	Number of Respondents per Corporation	Total Respondents
32 Commercial State Corporations (Census)	1. Chief Executive Officer 2. Head of Finance/ Accounts 3. Head of Human Resource Management and Development	6	192

	4. Head of Operations 5.Head of ICT 6. Head of Marketing

The target population comprised all 32 commercial state corporations in Kenya, which were included in the study through a census approach. Within each corporation, six respondents were purposively selected from critical functional areas to ensure a comprehensive organizational perspective. This yielded a total of 192 respondents (32 × 6). The categories were chosen because they represent the leadership and managerial positions most directly involved in shaping corporate culture, driving innovation practices, and responding to regulatory frameworks.

3.4 Sample Size and Sampling Techniques

A sample is a subset drawn from a population using a defined procedure (Saunders, Lewis, Thornhill & Bristow, 2015). The study utilized a census approach, whereby all 32 commercial state corporations in Kenya were included to achieve comprehensive coverage of the target population. Within each corporation, six respondents were purposively selected from key functional departments, resulting in a total of 192 participants. The purposive selection was necessary because not every employee within a corporation could provide information relevant to the constructs under study (corporate culture, innovation practice, regulatory framework, and performance). Thus, the census referred to the inclusion of all organizations in the population, while the purposive strategy applied to the individual respondents within each organization.

This approach is consistent with recent methodological recommendations that distinguish between the unit of analysis (here, the corporation) and the unit of observation (the respondents providing data) (Etikan & Bala, 2023). It also preserved both breadth and depth of data collection. The study resultant sample distribution is illustrated by Table 3.

Table 3: Sample Distribution

Number of state corporations	Respondents Category						Total Respondents (Number of State Corporations * Respondents Category) (32*6)
	Chief Executive Officer	Head of Finance/ Accounts	Head of Human Resource Management and Development	Head of Operations	Head of ICT	Head of Marketing	
32	1	1	1	1	1	1	192

Source: Researcher (2025)

A **census of all 32 commercial state corporations** was conducted to ensure complete population coverage. Within each corporation, **six respondents were purposively selected** from critical functional areas, yielding a total of 192 respondents. This approach allowed the study to capture a broad organizational perspective (census) while ensuring that data were drawn from individuals best positioned to provide relevant insights (purposive selection).

3.5 Data Collection Instruments

The study "utilized primary data to address its specific objectives. Quantitative data were collected using a structured questionnaire. This method was preferred because it enabled respondents to complete the instrument independently and anonymously, while also being cost-effective, time-efficient, and suitable for reaching a large sample (Creswell, 2008)." "The questionnaire consisted of two sections: the first captured respondents' demographic details, while the second gathered data on the key study variables—innovation practices, corporate culture, regulatory framework, and the performance of commercial state corporations in Kenya." "Questionnaires were either self-administered, distributed and later collected, or sent electronically. The use of a questionnaire ensured uniformity in question administration, thereby enhancing the consistency and comparability of responses."

Cooper and Schindler (2006) noted that using structured questions in a questionnaire enhances the uniformity of responses. In this study, "structured items were presented on a five-point Likert scale, where respondents indicated their opinions on a scale ranging from 1 to 5." To ensure reliability, objectivity, and consistency of data, six key respondents were purposively selected from each commercial and corresponding regulatory state corporation. These comprised the Chief Executive Officer, Head of Finance/Accounts, Head of Human Resource Management and Development, Head of Information and Communications, Head of Operations, and Head of Marketing, as they were best positioned to provide comprehensive insights aligned with the study objectives.

3.6 Pilot Testing

A pilot test is an investigation which is carried out on a small group of respondents to make sure the questions being asked in the questionnaire are reliable (Marczyk, DeMatteo & Festinger, 2005). The objective of a pilot test is largely to test run the questionnaire and make use of the responses given to refine it for the main research (Muus & Baker-Demaray, 2007). Moreover, “it helps identify and rectify weaknesses in the research design and data collection instruments, as well as potential challenges that may arise during actual administration. Consequently, the questionnaire used in this study was pretested to ensure clarity, accuracy, and validity of the information before being distributed to the target respondents.”

A pilot study was conducted to pre-test the research instrument and assess its clarity, validity, and reliability. Following recent methodological recommendations that a pilot sample should constitute about 5–10% of the main study sample (Browne et al., 2021), 12 respondents (representing approximately 6% of the target population of 192) were selected from two randomly chosen commercial state corporations. These respondents were excluded from the main study to avoid contamination of results. Feedback from the pilot informed minor adjustments in wording and sequencing of items to enhance clarity and contextual relevance. Reliability was re-assessed using Cronbach’s Alpha, and all constructs exceeded the recommended threshold of 0.7 (Taber, 2021; George & Mallery, 2022), confirming the internal consistency of the instrument.

3.6.1 Reliability of Instrument

Reliability denotes the degree to which a scale can reproduce the same measurement results in repeated trials (Bajpai & Bajpai, 2014). The study employed Cronbach’s alpha (α) to assess the reliability of the measurement instruments. Cronbach's alpha is widely recognized as the most common method for evaluating reliability, particularly in studies that utilize multiple Likert-type scale items (Tavakol & Dennick, 2011). "The resulting alpha coefficient ranges from 0 to 1, where a value of 1 indicates perfect internal consistency, while 0 signifies no internal reliability." Higher alpha coefficient values therefore infer that the scales are more reliable (De Vaus, 2002; Kipkebut, 2010). While there is no consensus among researchers concerning the adequate value of reliability, as a rule of thumb, the widely acceptable Cronbach alpha coefficient should be at least 0.70 (Cooper & Schindler, 2014).

To ensure accuracy and reliability of the data collected through the questionnaires, "several procedures were undertaken. Completed questionnaires were subjected to data cleaning, which involved checking for missing responses, logical inconsistencies, and outlier values." Cases with substantial missing data were excluded from analysis, while minor omissions were addressed through mean substitution where appropriate (Kothari, 2019). Logical checks were conducted to confirm internal consistency of responses. To minimize non-response bias, reminders and follow-ups were made to participants, thereby achieving a high response rate (Creswell & Creswell, 2018). In addition, the questionnaire was carefully worded to reduce social desirability bias, and anonymity was assured to encourage honest responses (Bryman, 2016). These steps enhanced the validity of the findings and reduced systematic error.

3.6.2 Validity of Instrument

Validity refers to the approximate truth of an inference or knowledge claim of a relationship based on evidence that supports an inference as being true or correct (Shadish, Cook & Campbell, 2002). According to Leedy and Ormrod (2010), validity is the capability of a study tool to gauge what it is supposed to measure. They identify three commonly recognized types of validity: "content validity, criterion-related validity, and construct validity. Content validity ensures that the measurement items adequately and representatively capture all aspects of the concept being studied. Content validity can be attained in three approaches as follows: from literature, from qualitative studies and from an opinion of a team of specialists (Leedy & Ormrod, 2010)." The assessment of content validity for both the dependent and independent variables in this study was guided by expert judgment. Feedback and insights were sought from subject matter specialists through consultations with scholars and HRM professionals, and their recommendations were used to refine and improve the questionnaire.

The questionnaire to be used in this study, known as the Denison's questionnaire, has undergone a rigorous validation procedure to establish its face and content validity. As a result, it has been standardised for use in research. “The Denison Organisational Culture Survey (DOCS) has been used in several national settings, including the United States, Russia, Europe, the Middle East, Africa, and Asia (specifically Hong Kong), as shown by research conducted in these regions. Denison and his consulting business, which is situated in the United States, have extensively used the aforementioned instrument in many organisations like Daimler Chrysler, Norsk Hydro, Clariant, Danfoss, Swiss Re, IKEA, Roche, Shell, UBS, and Credit Suisse.” According to McBurney (1994), face validity refers to the superficial appearance of a test aligning with its intended purpose, while content validity pertains to the extent to which a test adequately covers the range of behaviours associated with the theoretical concept being assessed. The test for construct validity were evaluated using the Kaiser Meyer Olkin (KMO) & Bartlett Test of Sphericity (Othman et al., 2019). This test checks the null hypothesis that the original correlation matrix is an identity matrix (Thao et al., 2022).

3.7 Data Analysis and Presentation

Data obtained from the field were analyzed using quantitative techniques. Initially, the questionnaires were reviewed to eliminate incomplete or inaccurately filled ones and verified for completeness and accuracy. “The Statistical Package for the Social Sciences (SPSS) Version 23.0 was employed to process the data and generate tables and charts. Descriptive statistics were applied to analyze the quantitative data, enabling the computation of measures such as means, covariance, and standard deviations based on respondents’ feedback.”

“Correlation analysis was conducted to determine the relationships among the independent, mediating, moderating, and dependent variables. Pearson’s correlation coefficient was used to measure the strength and direction of these relationships. Regression analysis was then employed to assess the extent to which the independent variables influenced the performance of commercial state corporations in Kenya. This involved estimating the quantitative impact of the causal variables on the outcome variables using the collected data. Additionally, the statistical significance of the identified relationships was evaluated through Analysis of Variance (ANOVA)."

3.8 Tests of Assumptions

Regression models explain the association between the dependent and independent variables. They rely upon certain assumptions about the variables used in an analysis and violation of these assumptions can lead to unreliable results (Osborne & Waters, 2002). The study examined key assumptions of multiple regression analysis, including linearity, normality, multicollinearity, and heteroscedasticity, as outlined below.

3.8.1 Linearity Test

Linearity defines the dependent variable as a linear function of the predictor (independent) variables (Hair, Black, Babin, Anderson& Tatham, 2010). In multiple regression analysis, the assumption of linearity refers to the extent to which variations in the dependent variable are proportionally associated with changes in the independent variable. If linearity is violated, all the estimates of the regression including regression coefficients, standard errors, and tests of statistical significance may be biased (Keith, 2006). "The linear relationship between the dependent variable and other variables was examined using Pearson's product-moment correlation coefficient. This test assesses both the strength and direction of the linear association between two continuous variables, enabling the researcher to determine the degree of linear connection among the study variables. Perhaps the easiest and clear-cut one, yet rigorous, is the deviation from linearity test. If the significant value for deviation from linearity is less than 0.05, the relationship between independent and dependent variables is not linear, and this presents problems during modeling."

3.8.2 Normality Test

Normality is the assumption that variables have normal distributions (Osborne & Waters, 2002). This implies that the errors follow a normal distribution and that plotting the residual values produces a curve resembling a normal distribution. When the variable scores are skewed, the correlations with other measures tend to weaken. According to Hoyt, Leierer and Millington

(2006) non normally distributed variables can distort relationships and significance tests and also influence both Type I and Type II errors and the overall accuracy of results. The Kolmogorov-Smirnov (K-S) test at a significance level of $\alpha = 0.05$, along with graphical techniques, was employed to assess the normality of the score distribution. The K-S test is a non-parametric goodness-of-fit test. This means it doesn't rely on any assumptions about the underlying distribution of the data, making it suitable for normality testing.

3.8.3 Multicollinearity Test

According to Hair et al., (2010), multicollinearity refers to a situation in which one independent variable is actually a combination of the other variables or when the independent variables are exceedingly correlated. “They further contend that the presence of multicollinearity among the independent latent constructs may distort the estimation of regression coefficients. Multicollinearity distinctively increases the standard errors of the coefficients, which leads to decrease in the prognostic ability of the independent variables on the dependent variable (Tabachnick & Fidell, 2014).” A test of multi-collinearity were conducted to determine if any of the variables under consideration were significantly correlated with each other. VIF ranging from 1 to 10 indicate absence of multicollinearity while presence of multicollinearity is detected when VIF is more than 10 or less than 1 (Lindner, Puck & Verbeke, 2020). To evaluate this correlation, the Variance Inflation Factor (VIF) was utilized. If the VIF values surpass 10 (or 5 when using a more conservative approach) then there is a strong likelihood of multi-collinearity, which can have an adverse effect on the research (Newbert, 2008).

3.8.4 Homoscedasticity Test

Homoscedasticity is a situation whereby the variance of the dependent variable does not vary across the data (Ghasemi & Zahediasl, 2012). “When the variance of errors is inconsistent across observations, the condition is known as heteroscedasticity.” Heteroscedasticity can affect both the validity of inference and reduce statistical power of hypothesis tests and influence the accuracy of confidence intervals for regression coefficients, depending on the form of the heteroscedasticity (Ghasemi & Zahediasl, 2012). The Levene test for equality of variances was used to assess the presence of homoscedasticity. In this study, Homoscedasticity was tested using the Levene test, in which hypotheses are stated and tested as null hypothesis (H0): Research data is homoscedastic, while alternative hypothesis (H1): Research data is heteroscedastic, at the level of significance ($\alpha = 0.05$).

3.9. Data Analysis and Hypotheses Testing

Data analysis is a process of inspecting, cleaning, transforming, and modeling data with the goal of highlighting useful information, suggesting conclusions, and supporting decision making (Mugenda & Mugenda, 2013). The collected data were "analyzed to generate both descriptive statistics—comprising measures of central tendency and variability—and regression analysis to address the study objectives. The data analysis process involved several steps: first, the completed questionnaires were reviewed for completeness and consistency, after which the data were checked for errors and omissions." Quantitative data obtained from the questionnaires were then analyzed using SPSS Version 23. Finally, commercial state corporations performance was a simple regression against one independent variable and three multiple regression analysis (process analysis method) as suggested by Baron and Kenny (1986) and Hayes (2013), for inferential results. The model used on each hypothesis and the expected output is discussed below.

3.9.1 Simple Regression model

To determine "the influence of corporate culture and performance of commercial state corporations in Kenya"

$Y = \beta_0 + \beta_1 CC + e$ ……………………………………………………………………………….(1)

Where:

β_0 is constant

β_1 is coefficient parameter to be determined

CC is corporate culture

e is error/disturbance

Y is performance of commercial state corporations

3.9.2 Mediation Relationship

To "examine the mediating role of innovation practice on the relationship between corporate culture and performance of commercial state corporations in Kenya"

1st model

$$Y = \beta_0 + \beta_1 CC + e \ldots\ldots (2)$$

2nd model

$$IP = \beta_0 + \beta_2 CC + e \ldots\ldots (3)$$

3rd model

$$Y = \beta_0 + \beta_2 IP + e \ldots\ldots (4)$$

4th model

$$Y = \beta_0 + \beta_3 IP + \beta_4 CC + e \ldots\ldots (5)$$

Where:

IP is Innovation practice

CC is corporate culture

β_0 is constant (intercept)

β_1, β_2, β_3 and β_4 are coefficient parameters to be determined

Y is performance of commercial state corporations

e is error/disturbance

Steps 1–3 were employed to confirm the existence of a zero-order relationship among the variables. If any of these relationships proved non-significant, it indicated that mediation was not feasible (Baron & Kenny, 1986). However, if significant relationships were observed across steps 1 to 3, the analysis proceeded to step 4, where mediation was deemed present if the effect of corporate culture (CC) remained significant after controlling for innovation practices (IP). Full mediation was confirmed when CC became non-significant upon controlling for IP, whereas partial mediation was indicated when both CC and IP significantly predicted the dependent variable (Y).

3.9.3 Moderation Relationship

To "assess the moderating influence of the regulatory framework on the relationship between corporate culture and the performance of commercial state corporations in Kenya, the following procedure was applied."

$$Y = \beta_0 + \beta_1 CC + e \ldots\ldots (6)$$

$$Y = \beta_0 + \beta_1 CC + \beta_2 RF + e \ldots\ldots (7)$$

$Y = \beta_0 + \beta_1 CC + \beta_2 RF + \beta_3 IP*RF + e$ ……………………………………………………….(8)

Where:

CC is corporate culture

RF is Regulatory Framework

β_0 is constant (intercept)

β_1, β_2 and $\beta_3$are coefficient parameters to be determined

Y is performance of commercial state corporations

e is error/disturbance

Check change in R^2 when interaction term is introduced.

Y is performance of commercial state corporations

If by introducing interaction term, "(I*RF) the effect of CC and RF become insignificant, then moderation has occurred. If by introducing interaction term, (CC*RF) the effect of CC and RF remain significant, then moderation has occurred and enhancing /buffering effects are also significant."

3.9.4 Moderated Mediating Model

To determine moderating effect of regulatory framework on the mediating effect of innovation practice, Hayes (2013) model for Mediation, Moderation, and Conditional Process Analysis was adopted.

$I = \beta_0 + \beta_1 CC + \beta_2 RF + \beta_3 IP + \beta_4 I*RF + \varepsilon$……………………………………………….…...(9)

$Y = \beta_0 + \beta_1 CC + \beta_2 RF + \beta_3 I*RF + \varepsilon$……………………………………….……………….(10)

Where;

β_0= Constants

I(Indirect Effect)= Performance;

Y (Direct effect)= Performance;

IP is Innovation practice

RF is Regulatory Framework

CC is Corporate Culture

IP*RF= Interaction

ε = Error term

Table 4: Summary of Research Objectives, Hypothesis and empirical models

Objectives	Hypothesis	Type of Analysis	Interpretation of results
To establish the relationship between corporate culture and performance of commercial state corporations in Kenya	Hypothesis 1: corporate culture has no significant influence on performance of commercial state corporations in Kenya	**Linear Regression Analysis** $Y= \beta_0+\beta_1 CC_1+\varepsilon$ Where Y = Performance β_0 = Intercept β_1 = Regression Coefficient of I_1 CC_1=Innovation practice ε = Error term	R^2 Coefficient of 1 indicates a perfect predictability of the model P-value ≤ 0.05 shows a significant correlation between the variables. "ANOVA F-test with p-value ≤ 0.05 shows that the model has predictive ability VIF< 10, Tolerance level>0 indicates no multicollinearity problems".
To explore the mediating role of innovation practice on the relationship between corporate culture and performance of commercial state corporations in Kenya	Hypothesis 2: innovation practice has no significant mediating effect on the relationship between corporate culture and performance of commercial state corporations in Kenya	**Regression Analysis** i $Y=\beta_0+\beta_1 CC_1+\varepsilon$ ii. $IP=\beta_0+\beta_1 CC_1+\varepsilon$ iii. $Y = \beta_0+\beta_2 IP_2+\varepsilon$ iv. $Y=\beta_0+\beta_1 CC_1+ \beta_2 IP_2+\varepsilon$ Where Y = Performance CC_1=Corporate Culture IP_2= Innovation practice β_0 =Constant β_1,β_2= Coefficient ε =Error term	R^2 "Coefficient of 1 indicates a perfect predictability of the model P-value ≤ 0.05 shows significant correlation between the variables. ANOVA F-test with p-value ≤ 0.05 shows that the model has predictive ability. VIF< 10, Tolerance level>0 indicates no multicollinearity problems".
To establish the moderating role of regulatory framework on the relationship between corporate culture and performance of commercial state corporations in Kenya.	Hypothesis 3: Regulatory framework have no significant moderating effect on the relationship between corporate culture and performance of commercial state corporations in Kenya	**Régression analysis** i. $Y=\beta_0+\beta_1 CC_1 +\varepsilon$ ii. $Y=\beta_0+\beta_1 CC_1+\beta_3 RF_3+\varepsilon$ ii. $Y=\beta_0+\beta_1 CC_1+\beta_4 IP_1{*} RF_3+ \varepsilon$ Where Y= Performance β_0 = Constant β_1,β_4, = Coefficients CC_1=Corporate Culture RF_3=Regulatory Framework	R^2 "Coefficient of 1 indicates a perfect predictability of the model P-value ≤ 0.05 shows a significant correlation between the variables. ANOVA F-test with a P value of ≤ 0.05 shows that the model has predictive ability." VIF< 10, Tolerance level>0 indicates no

Objectives	Hypothesis	Type of Analysis	Interpretation of results
		ε = Error term	multicollinearity problems
To determine the moderated mediation effect of regulatory framework and innovation practice on the relationship between corporate culture and performance of commercial state corporations in Kenya	Hypothesis 4: There is no significant moderated mediation effect of regulatory framework and innovation practice on the relationship between corporate culture and performance of commercial state corporations in Kenya	**Régression analysis** i. I= $\beta_0 + \beta_1 CC_1 + \beta_2 RF_3 + \beta_3 IP_2 + \beta_4 CC_1 * RF_3 + \varepsilon$ ii.Y= $\beta_0 + \beta_1 CC_1 + \beta_2 RF_3 + \beta_3 CC_1 * RF_3 + \varepsilon$ Where; β_0 = Constant I= Indirect Effect to Performance; Y= Direct effect to Performance; CC_1= corporate culture; RF_3= Regulatory Framework; IP_2=Innovation practice $IP_1 * RF_3$ = Interaction ε = Error term	If the null of 0.000 does not fall in between the lower boundary (Boot LLCI) and the upper boundary (Boot ULCI) of the 95% confidence interval, we infer that the indirect effect is conditional on the level of the moderator variable thus showing that the intervening variable is significantly related to dependent

3.10 Ethical Consideration

Similar to other social science studies, this research observed several ethical considerations, including the following;

3.10.1 Voluntary Participation

The researcher obtained consent from participants prior to administering the surveys. Participants were informed that their involvement in the study was entirely voluntary and that they could withdraw at any stage without penalty. The researcher also assured them that all information provided would be used solely for academic research purposes. Furthermore, the researcher explained that obtaining meaningful results for the project depended on the respondents giving their views on the research topic.

3.10.2 Confidentiality

The researcher informed the participants that their responses in this survey remained confidential and solely used for a research project at the Management University of Africa. They were assured that their anonymity and privacy would be respected throughout the duration of the study.

3.10.3 Privacy

The researcher made it clear to the respondents that the information collected for this research would be guarded in the strictest confidence and with the utmost privacy. The results were coded so that no respondent could be identified by name.

3.10.4 Recognition of authorship

The researcher duly acknowledged all authors whose works were referenced in the study, thereby upholding academic integrity and preventing plagiarism, which constitutes a serious academic and ethical offense.

3.10.5 Informed participation

Regarding the selection of participants for data collection, the ethical principle dictates that participation must be voluntary, based on full disclosure of relevant information by the researcher. Likewise, participants retain the right to withdraw from the study at any point they choose. The participants were asked to provide their consent to participate via email.

3.11 Chapter Summary

This chapter "outlined the methodology adopted to examine the relationship between corporate culture and the performance of commercial state corporations in Kenya, while considering the mediating influence of innovation practice and the moderating role of the regulatory framework." It provided a detailed account of the research process, including the research philosophy, design, and methods used to address the research questions. The chapter also described the target population, research instruments, data collection methods, sample size, sampling procedures and techniques, pilot testing, data analysis and presentation methods, as well as the ethical considerations observed throughout the study.

CHAPTER FOUR
DATA ANALYSIS, RESULTS AND DISCUSSIONS

4.0 Introduction

This chapter presents the findings derived from the analysis of the collected research data. The main objective of the study was to examine the effect of innovation practice, corporate culture, and the regulatory framework on the performance of commercial state corporations in Kenya. The chapter is structured according to the specific research objectives, which include: "assessing the relationship between innovation practice and performance of commercial state corporations in Kenya; examining the mediating role of corporate culture in the relationship between innovation practice and performance; determining the moderating influence of the regulatory framework on the relationship between innovation practice and performance; and analyzing the combined moderated mediation effect of the regulatory framework and corporate culture on the relationship between innovation practice and performance of commercial state corporations in Kenya."

Data analysis was conducted in line with the stated objectives and research hypotheses. The hypotheses tested included: "($H0_1$): Innovation practice does not have a significant effect on the performance of commercial state corporations in Kenya; ($H0_2$): Corporate culture does not mediate the relationship between innovation practice and performance of commercial state corporations in Kenya; ($H0_3$): The regulatory framework does not moderate the relationship between innovation practice and performance of commercial state corporations in Kenya; and ($H0_4$): There is no moderated mediation effect of the regulatory framework and corporate culture on the relationship between innovation practice and performance of commercial state corporations in Kenya." The chapter also presents analysis results on respondents' response rate, their demographic information, diagnostic statistics, descriptive and inferential statistics.

4.1 Response Rate

A respondent in a research study refers to an individual who contributes valuable data by answering questions in a survey or participating in an interview conducted by the researcher (Rubin & Babbie, 2011). The response rate is calculated as the proportion of individuals who participate in the study relative to the total number of individuals selected for the sample, expressed as a percentage. This metric is sometimes referred to as the completion rate. In the context of self-administered surveys, it is also known as the return rate, which indicates the percentage of distributed questionnaires that are completed and returned (Rubin & Babbie, 2011). For this study, the respondents included employees from commercial state corporations in Kenya. The research specifically focused on six (6) respondents who comprised of, "Chief Executive Officers, Head of Finance/Accounts, Head of Human Resource Management and Development, Head of Information and Communications and Head of Operations." Table 5 in this study illustrates the response rate obtained from these respondents.

Table 5: Response Rate

Response Rate	Frequency	Percent
Returned	179	93.2%
Unreturned	13	6.8%
Total	**192**	**100%**

A total of 192 questionnaires were administered out of which 179 were adequately filled, collected and used in the study translating into 13 percent response rate. In the perspective of Babbie (2015) who opined that return rates of 50 percent are acceptable, 60 percent is regarded as good while 70 percent and above is regarded as excellent. Thus, this response rate was considered excellent and ideal for this study. Therefore, "the data from the 179 questionnaires adequately filled and collected was used for analysis in this study."

4.2 Pilot Study Results

Prior to conducting the main study, a pilot test was undertaken to evaluate the reliability and validity of the research instrument. This initial assessment was essential in refining and improving the questionnaire by verifying the consistency and precision of the measurement items. Additionally, it helped identify and resolve any issues related to questionnaire completion, ultimately making it more user-friendly (Cooper & Schindler, 2014). The pilot study involved a sample size of 5% of the total 192 questionnaires, which amounted to 12 respondents from commercial state corporations in Kenya. The decision to utilize 5% of the study sample was informed by the recommendation from Arain et al. (2010), which suggests that an effective pilot study should encompass between 1% and 10% of the actual sample size. It is important to clarify that the 12 participants in the pilot study were not included in the main survey. After the pilot study, the questionnaire was revised to incorporate feedback and insights obtained from the initial testing. The study results were then systematically presented in subsections covering reliability analysis, factor analysis, and multicollinearity assessment.

4.2.1 Test of Reliability

Reliability refers to the extent to which a measurement instrument yields consistent results across multiple assessments (Chakrabartty, 2013). It encompasses several important aspects such as consistency, precision, repeatability, and trustworthiness of the research findings. A reliable instrument consistently reduces measurement bias and ensures stability over time and across various items within the tool. In essence, reliability represents the extent to which an assessment tool yields consistent and dependable outcomes, demonstrating that the obtained scores accurately reflect the true values being measured. The primary objective of evaluating reliability is to estimate measurement errors, which are typically random; thus, it serves as an indicator of an instrument's internal consistency (Cooper & Schindler, 2014). In this research, Cronbach's Alpha was employed to evaluate the internal consistency of the instrument.

Cronbach's Alpha is a widely used statistic for assessing internal consistency. When measurements are parallel, they demonstrate equal variances and covariances (Bryman, 2016). The alpha coefficient ranges from 0 to 1. In this study, these coefficient ranges were used to evaluate the reliability of factors derived from Likert-scale questionnaires, with responses rated on a 1-to-5 scale. The reliability coefficient is determined through test-retest reliability, which involves administering the same measure multiple times (Cooper & Schindler, 2014). A coefficient value above 0.7 is deemed acceptable, while values exceeding 0.8 are considered very good (Cooper & Schindler, 2014). Test-retest reliability assesses variations in scores that may arise due to measurement errors across different testing sessions. This method involves conducting the same test on a group of individuals over a period ranging from a few weeks to several months. Internal consistency evaluates the extent to which different items measuring the same construct produce consistent results. It examines the homogeneity of items within a scale or measure and can be assessed in a single testing session, avoiding many of the challenges associated with repeated-measures reliability assessments.

In this study, “a Cronbach’s Alpha value of 0.7 was set as the minimum threshold for establishing reliability. Different scholars propose varying cut-off points for determining reliability.” For instance, Bryman (2016) considers a Cronbach's value of 0.7 and above to be reliable. Similarly, Cooper and Schindler (2014) recommend a range of 0.7 to 0.9 for good reliability tests, while Marshall and Rossman (2014) suggest a lower threshold of 0.6. Therefore, this study adopted 0.7 as a strong benchmark for reliability consistency (Creswell & Clark, 2017). To assess the reliability of the survey instrument, a pilot study was carried out with participants from commercial state corporations in Kenya. Respondents completed the questionnaire and provided feedback on unclear questions, identified flaws in items or instructions, and suggested possible improvements. The reliability results for all variables exceeded the 0.7 threshold, indicating strong internal consistency of the measurement items. Accordingly, “the study adopted a minimum acceptable Cronbach’s Alpha of 0.7.” Table 6 presents the values of the questionnaire items, summarizing the results of the reliability tests.

Table 6: Reliability results

Variable	Number of Items	Cronbach Alpha
Innovation practice	30	0.927
Corporate Culture	28	0.911
Regulatory Framework	16	0.824
Organisational performance	20	0.936

The analysis revealed “that the Cronbach's alpha coefficient for the Innovation practice variable was 0.927, based on a total of thirty (30) items.” This high value suggests that the items used to assess the Innovation practice construct share a common underlying characteristic. Additionally, since these items have been utilized and refined by various researchers over time, they reflect a robust measure of the Innovation practice concept. For the other variables, the Cronbach's alpha values were as follows: Corporate Culture at 0.911, Regulatory Framework at 0.824, and organizational performance at 0.936. These coefficients indicate that the items within each respective variable construct are consistent and aligned with the same underlying dimension. Overall, “the findings indicate that all constructs attained high reliability coefficients, implying that each variable has a dependable measurement index. This demonstrates that the data collection instrument is reliable and appropriate for the study.”

4.2.2 Factor Analysis for Test of Validity

To evaluate the validity of the research instrument, factor analysis was conducted using principal component analysis. This statistical method assesses the variability among observed and correlated variables, allowing for the identification and removal of any redundant or outlier items. Factor analysis is used to identify a reduced set of underlying dimensions or factors that can adequately capture the relationships among interrelated variables. It is particularly useful for measuring constructs that cannot be directly quantified, summarizing extensive datasets, and developing as well as testing theoretical frameworks.

In this study, “factor analysis was applied to validate the research instrument. The suitability of the sample size for this analysis was evaluated using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. The KMO statistic assesses whether the data are appropriate for factor analysis and other inferential tests, such as regression analysis, by indicating the sufficiency of the correlations among variables. The KMO value ranges from 0 to 1, where a value of 0 suggests that partial correlations are high relative to total correlations, indicating that factor analysis may not be suitable due to scattered correlation patterns.” Conversely, “a value near 1 indicates compact correlation patterns, suggesting that factor analysis is likely to produce distinct and meaningful factors. A KMO value above 0.5 is generally considered adequate for statistical analysis (Field, 2000).” In this study, both the KMO measure and Bartlett’s Test of Sphericity were used to assess sampling adequacy. The results, presented in Table 7, confirm that the data were appropriate for further analysis.

Table 7: Summary of KMO and Bartlett’s Test

Variable	**KMO**	**Bartlett’s Test of Sphericity**		
		Chi-Square (χ)	**Df**	**Sig. Level**
Innovation practice	.861	3976.010	435	.000
Corporate Culture	.526	2813.011	300	.000

Variable	KMO	Bartlett's Test of Sphericity		
		Chi-Square (χ)	Df	Sig. Level
Regulatory Framework	.487	3405.844	136	.000
Organisational performance	.836	3798.781	171	.000

The findings presented in Table 7 demonstrate that factor analysis was appropriate, as the Kaiser-Meyer-Olkin (KMO) index exceeded the threshold of 0.5. The specific KMO values for each variable were as follows: Innovation practice (KMO = 0.861, Chi-square (χ) = 3976.010, degrees of freedom (df) = 435, and significance level = 0.000); Corporate Culture (KMO = The results for the variables were as follows: Innovation Practice (KMO = 0.526, Chi-square (χ^2) = 2813.011, df = 300, p = 0.000); Regulatory Framework (KMO = 0.487, Chi-square (χ^2) = 3405.844, df = 136, p = 0.000); and Organizational Performance (KMO = 0.836, Chi-square (χ^2) = 3798.781, df = 171, p = 0.000). The p-value from Bartlett's Test of Sphericity was 0.000, confirming that the data were significant and valid for analysis, indicating meaningful relationships among the studied variables. Overall, "the KMO scores were substantial, all exceeding 0.70, demonstrating that the items were valid and appropriate for subsequent statistical analyses, including factor analysis, regression analysis, and other relevant tests."

4.2.2.1 Factor analysis for Innovation practice

A factor analysis was performed on the statements related to Innovation practice, which was made up of four key dimensions: Process innovation practice, Product innovation practice, marketing innovation practice, and Organisational innovation practice. This analysis aimed to identify any correlated variables that could be redundant, thereby allowing for a reduction in data complexity. The factor analysis serves to elucidate the structure of interrelationships among the variables by defining distinct factors. "To accomplish this, the items were analyzed using Principal Component Analysis (PCA) with varimax rotation in SPSS version 28." This methodological approach facilitated the reduction of data and assisted in pinpointing the latent variables that most effectively explain the concept of Innovation practice. One widely used approach for deciding how many Principal Components to retain is through a graphical tool called a scree plot." This plot illustrates the eigenvalues on the y-axis plotted against their respective Principal Component numbers on the x-axis. The decision on the number of Principal Components to keep is made by visually identifying the point where the slope of the graph exhibits a noticeable change. It is recommended to retain Principal Components that have eigenvalues greater than zero (Field, 2013).

During this process, “coefficients with absolute values below 0.3 were suppressed, retaining only those items that had high significance and strong influence in forming the variables.” Njoroge (2015) recommended suppressing factor loadings below 0.3 in order to focus on items with substantial contribution to variable formation. Factor extraction followed the Kaiser Criterion, where factors with eigenvalues of 1 or higher were considered distinct. For Innovation Practice, six statements had factor loadings below the 0.3 threshold and were thus excluded from the analysis and therefore the statements were removed in the formation of composite variable Innovation practice and the six (6) statements were not applied further analysis in the study. “Total Variance analysis indicates that the twenty four (24) statements Innovation practice can be factored into 1 factor.” The innovative practice scree plot figure 2 illustrates the graph of 24 Principal Components related to Innovation Practices, all of which had eigenvalues that were not less than zero (0). As a result, these 24 Principal Components were utilized to create a single composite variable for Innovation Practices. The Innovation practice components labeled 25 to 30 were excluded from this analysis because their eigenvalues fell below zero (0). Appendix IV shows the factor loading of the extracted components for innovative practice.

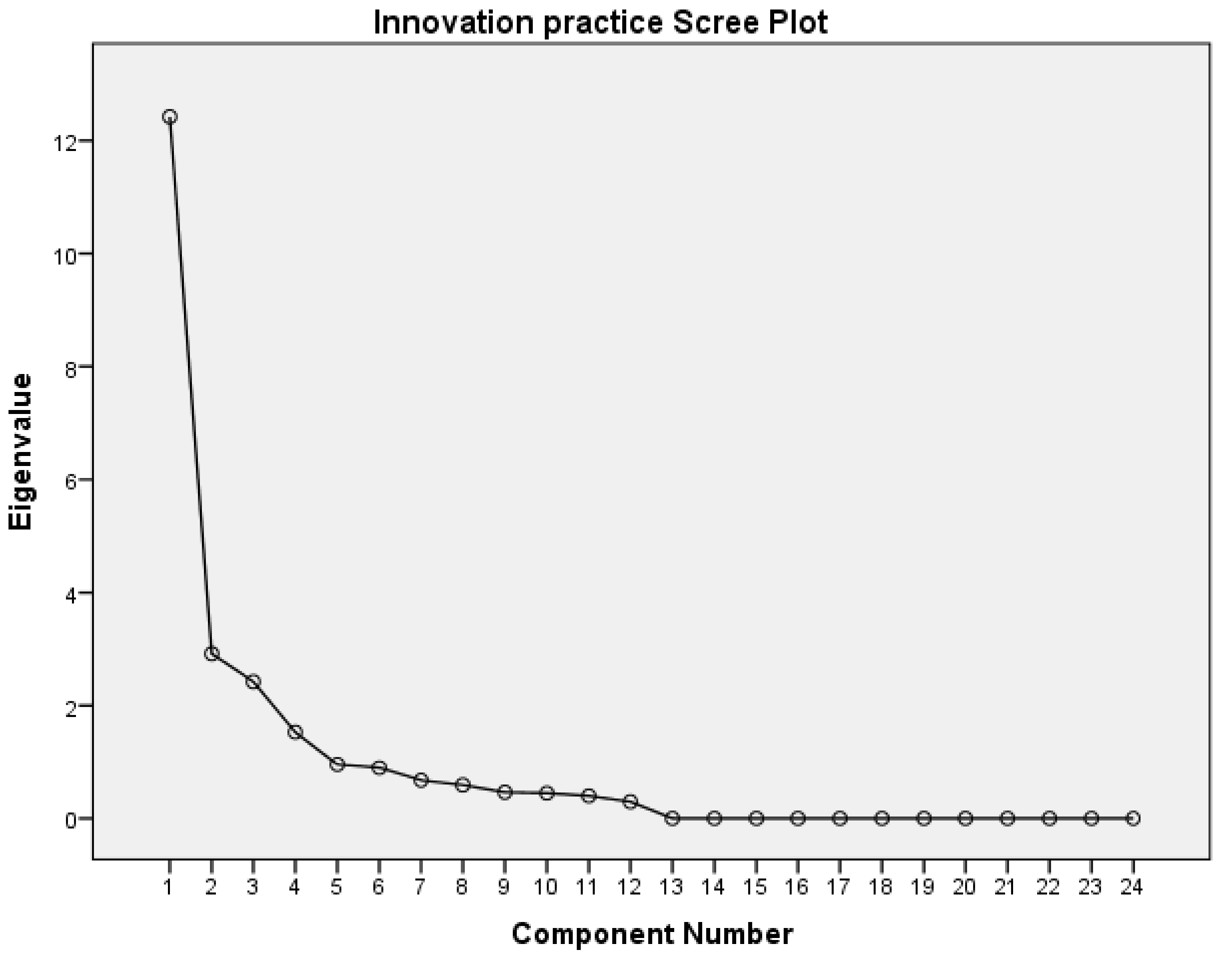


Figure 2: Innovative practice scree plot

4.2.2.2 Factor analysis for Corporate Culture

Factor analysis was conducted on the items pertaining to Corporate Culture, "which comprised four primary dimensions: Clan culture, Adhocracy culture, Market culture, and Hierarchy culture. This analysis aimed to identify any correlated variables that could be redundant, thereby allowing for a reduction in data complexity." The factor analysis serves to elucidate the structure of interrelationships among the variables by defining distinct factors. To achieve this, "the statements were subjected to Principal Component Analysis (PCA) along with varimax rotation using SPSS version 28. This methodological approach facilitated the reduction of data and assisted in pinpointing the latent variables that most effectively explain the concept of Corporate Culture." One widely used approach for deciding how many Principal Components to retain is through a graphical tool called a scree plot. This plot displays the eigenvalues on the y-axis against the corresponding Principal Component numbers on the x-axis. The decision on the number of Principal Components to keep is made by visually identifying the point where the slope of the graph exhibits a noticeable change. It is recommended to retain Principal Components that have eigenvalues greater than zero (Field, 2013).

In this process, "coefficients with absolute values below 0.3 were suppressed, retaining only items that demonstrated high significance and strong influence in forming the variables." Njoroge (2015) recommended suppressing factor loadings below 0.3 during factor analysis to focus on items with substantial contribution to variable formation. Factor extraction followed the Kaiser Criterion, where factors with eigenvalues of 1 or higher were considered distinct. For Corporate Culture, "five statements had factor loadings below 0.3 and were therefore excluded from the analysis and therefore the statements were removed in the formation of composite variable Corporate Culture and the five (5) statements were not applied further analysis in the study. Total Variance analysis indicates that the twenty three (23) statements Corporate Culture can be factored into 1 factor." The Corporate Culture scree plot figure 3 illustrates the graph of 23 Principal Components related to Corporate Culture, all of which had eigenvalues that were not less than zero (0). As a result, these 23 Principal Components were utilized to create a single composite variable for Corporate Culture. The components labeled 24 to 28 were excluded from this analysis because their eigenvalues fell below zero (0). Appendix IV shows the factor loading of the extracted components for Corporate Culture.

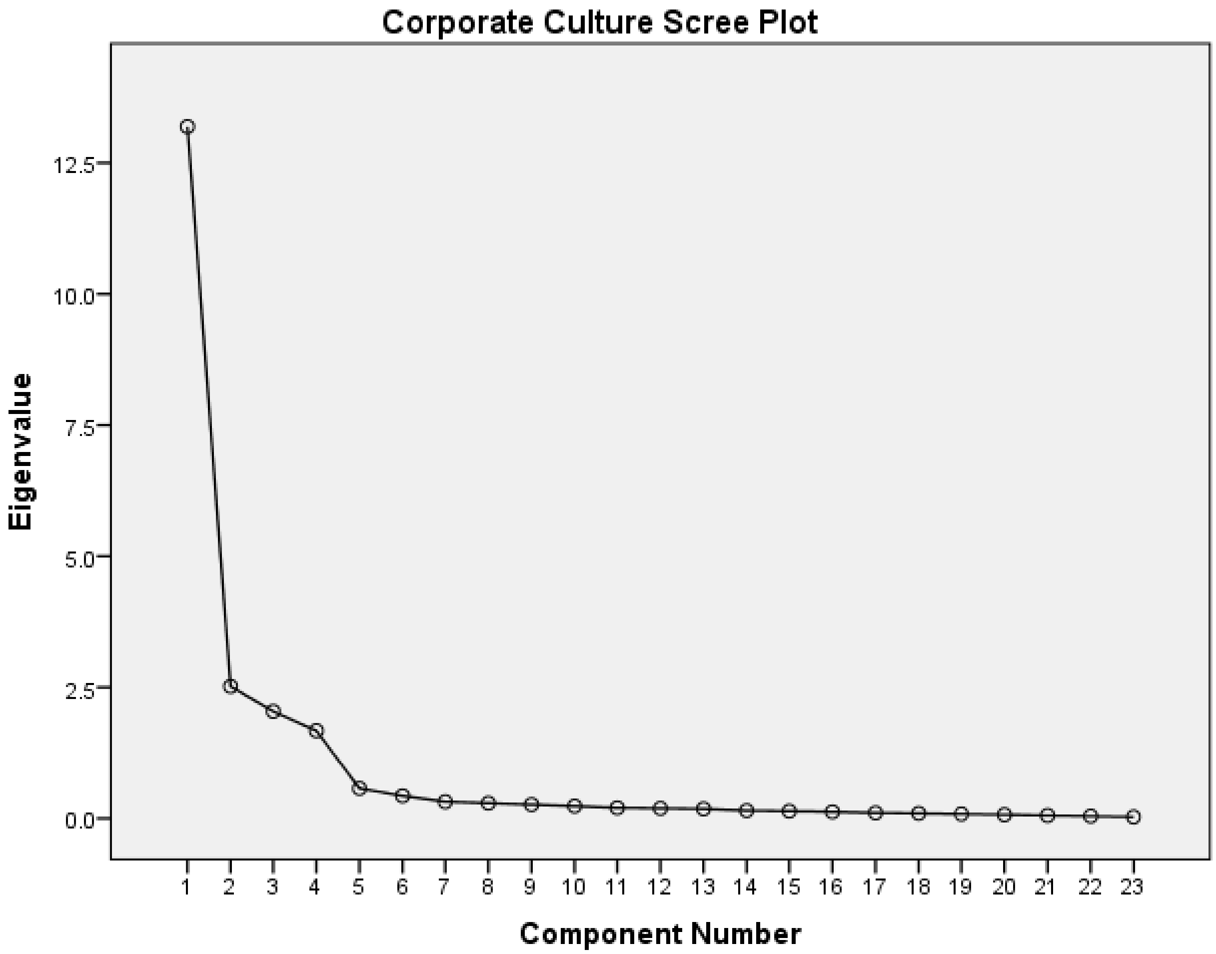


Figure 3: Corporate Culture scree plot

4.2.2.3 Factor analysis for Regulatory Framework

A factor analysis was performed on the statements related to Regulatory Framework, which was made up of three key dimensions: Legal framework on institutional structure, Performance monitoring and Control and transparency of operational performance. This analysis aimed to identify any correlated variables that could be redundant, thereby allowing for a reduction in data complexity. The factor analysis serves to elucidate the structure of interrelationships among the variables by defining distinct factors. To achieve this, "the statements were subjected to Principal Component Analysis (PCA) along with varimax rotation using SPSS version 28. This methodological approach facilitated the reduction of data and assisted in pinpointing the latent variables that most effectively explain the concept of Regulatory Framework." One widely used approach for deciding how many Principal Components to retain is through a graphical tool called a scree plot. This plot displays the eigenvalues on the y-axis against the corresponding

Principal Component numbers on the x-axis. The decision on the number of Principal Components to keep is made by visually identifying the point where the slope of the graph exhibits a noticeable change. It is recommended to retain Principal Components that have eigenvalues greater than zero (Field, 2013).

In this process, "coefficients with absolute values below 0.3 were suppressed, retaining only items with high significance and strong influence in forming the variables." Njoroge (2015) recommended suppressing factor loadings below 0.3 during factor analysis to ensure that only the most meaningful items contribute to variable formation. Factor extraction followed the Kaiser Criterion, with factors having eigenvalues of 1 or greater considered distinct. For Regulatory Framework, four statements had factor loadings below 0.3 and were therefore excluded from the analysis and therefore the statements were removed in the formation of composite variable Regulatory Framework and the four (4) statements were not applied further analysis in the study. The total variance analysis shows that the twelve statements measuring Regulatory Framework can be consolidated into a single factor. The Regulatory Framework scree plot figure 4 illustrates the graph of 12 Principal Components related to Regulatory Framework, all of which had eigenvalues that were not less than zero (0). As a result, these 12 Principal Components were utilized to create a single composite variable for Regulatory Framework. The components labeled 9, 11, 12 and 13 were excluded from this analysis because their eigenvalues fell below zero (0). Appendix IV shows the factor loading of the extracted components for Regulatory Framework.

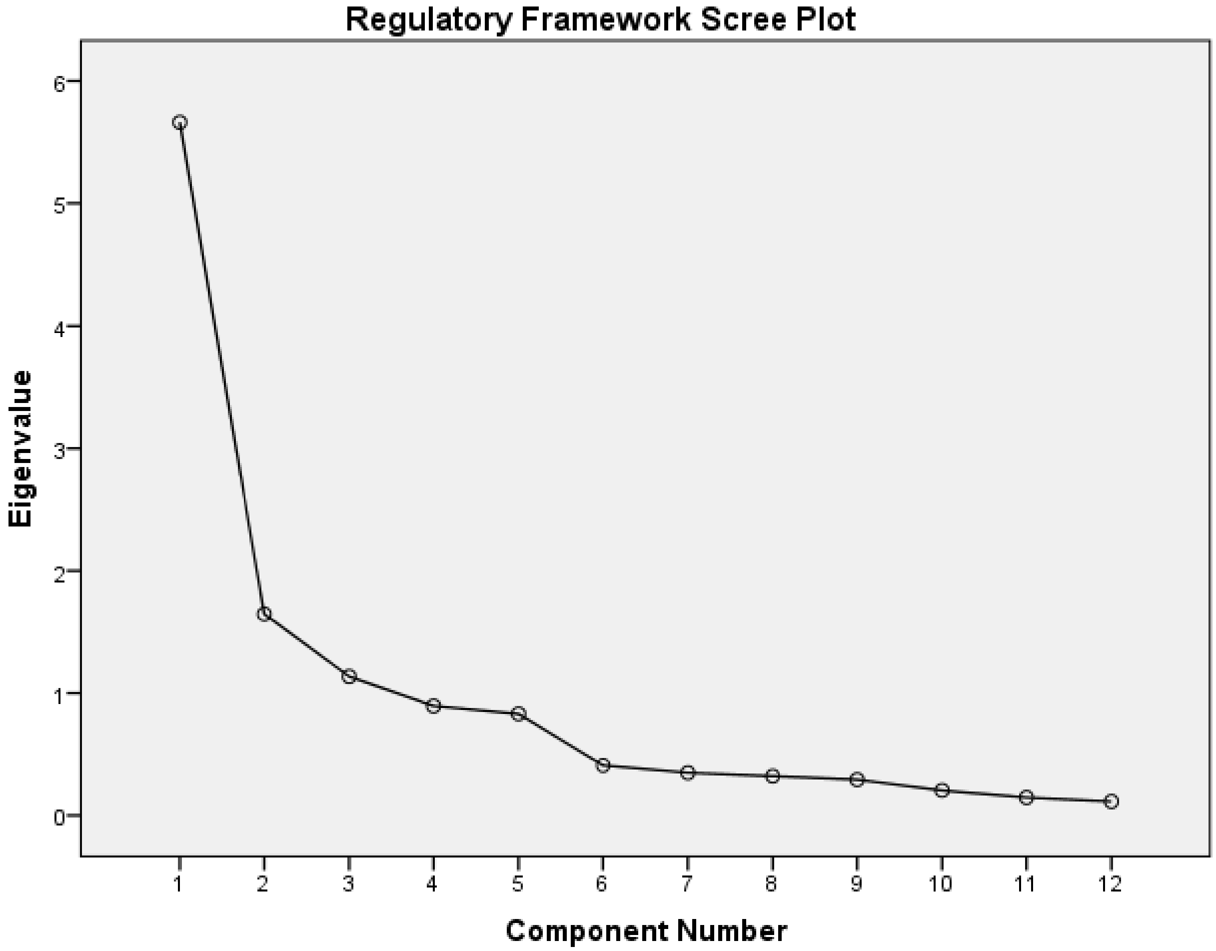


Figure 4: Regulatory Framework scree plot

4.2.2.4 Factor analysis for Organisational Performance

A factor analysis was performed on the statements related to Organisational Performance, which was made up of three key dimensions: Financial performance, Business performance and Organisational effectiveness. This analysis aimed to identify any correlated variables that could be redundant, thereby allowing for a reduction in data complexity. The factor analysis serves to elucidate the structure of interrelationships among the variables by defining distinct factors. To achieve this, "the statements were subjected to Principal Component Analysis (PCA) along with varimax rotation using SPSS version 28. This methodological approach facilitated the reduction of data and assisted in pinpointing the latent variables that most effectively explain the concept of Organisational Performance." One widely used approach for deciding how many Principal Components to retain is through a graphical tool called a scree plot. This plot displays the eigenvalues on the y-axis against the corresponding Principal Component numbers on the x-axis.

The decision on the number of Principal Components to keep is made by visually identifying the point where the slope of the graph exhibits a noticeable change. It is recommended to retain Principal Components that have eigenvalues greater than zero (Field, 2013).

In this process, "coefficients with absolute values below 0.3 were suppressed, retaining only items with high significance and strong influence in forming the variables." Njoroge (2015) recommended suppressing factor loadings below 0.3 during factor analysis to focus on the most meaningful items. Factor extraction followed the Kaiser Criterion, where factors with eigenvalues of 1 or greater were considered distinct. For Organizational Performance, "one statement had a factor loading below 0.3 and was therefore removed from the composite variable and excluded from further analysis. Total variance analysis indicated that the remaining eighteen statements measuring Organizational Performance could be consolidated into a single factor. The Organisational Performance scree plot figure 5 illustrates the graph of 18 Principal Components related to Organisational Performance, all of which had eigenvalues that were not less than zero (0)." As a result, these 18 Principal Components were utilized to create a single composite variable for Organisational Performance. The component labeled 19 was excluded from this analysis because their eigenvalues fell below zero (0). Appendix IV shows the factor loading of the extracted components for Organisational Performance

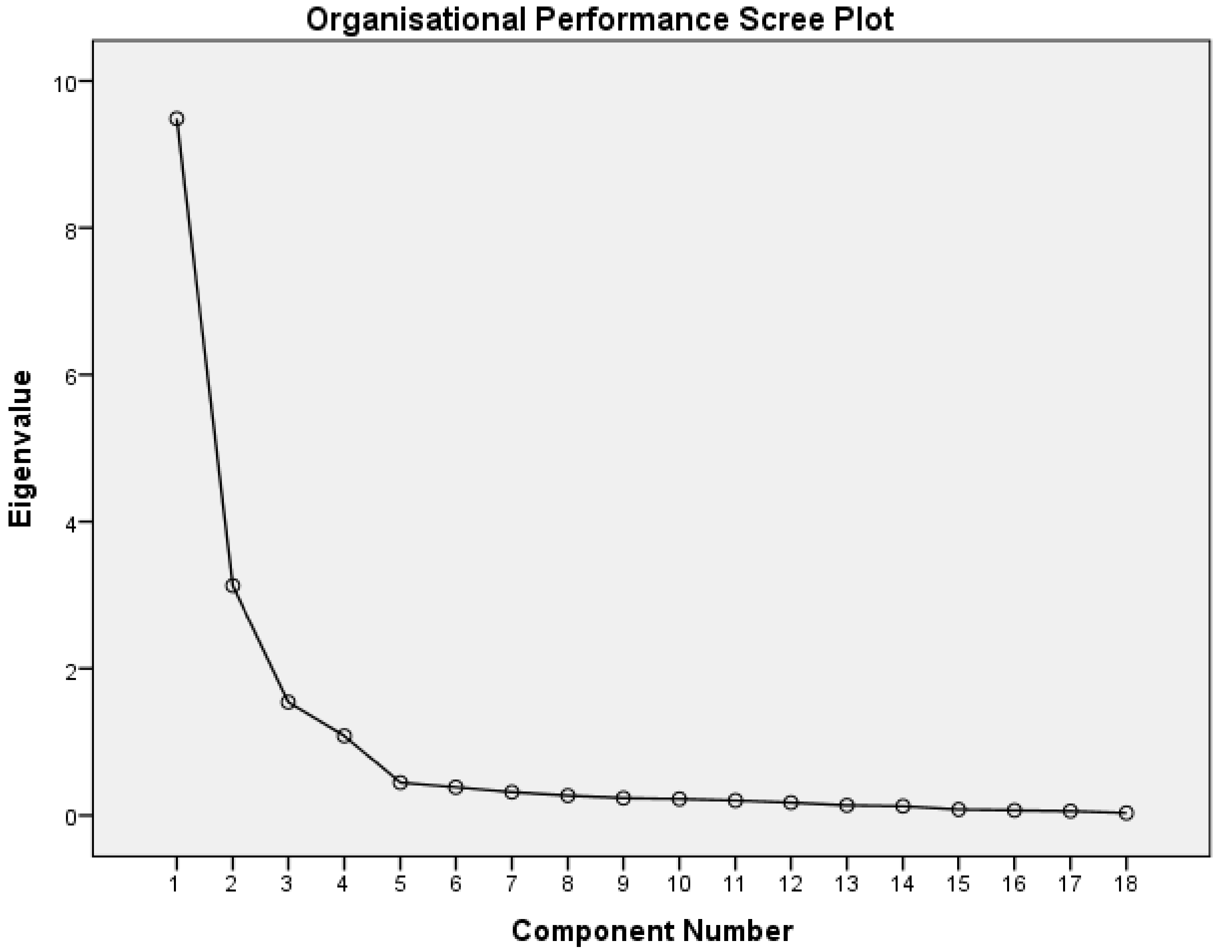


Figure 5: Organisational Performance scree plot

4.3 Tests of Statistical Assumptions

Statistical assumptions were evaluated "to determine whether the data satisfied the criteria for normality, linearity, independence, homogeneity, and collinearity." Based on the results of these tests, analyses of central tendency, dispersion, significance testing, associations, and predictive relationships were subsequently conducted.

4.3.1 Test of Linearity

Linearity refers to the state whereby the predictor variables inside a regression model have a linear or straight association with the dependent variable. This implies that there is a proportionate relationship between the change in the outcome variable and the change in the predictor variable(s). The linearity test is used to assess the fulfillment of the linearity assumption inside the regression model. This assumption has significant importance since it serves as the fundamental basis for the model. In the event that the assumption of linearity is not satisfied, it is possible that the outcomes derived from the regression model might be erroneous or deceptive. The assessment of linearity is often conducted via the use of analysis of variance (ANOVA). ANOVA, short for analysis of variance, is a statistical procedure used to assess and compare the means of two or more distinct groups. In the realm of linearity testing, the analysis of variance (ANOVA) is used to assess the disparity in the average value of the result variable across various levels of the predictor variable(s). If the condition of linearity is met, it may be inferred that the average value of the dependent variable remains relatively constant across different values of the independent variable(s). However, in cases when the assumption of linearity is not satisfied, it is seen that the average value of the result variable exhibits non-linear variations across distinct values of the predictor variable(s).

Table 8, "shows that there is a statistically significant linear relationship between the dependent variable, performance of commercial state corporations in Kenya, and the independent variables: Innovation practice, Corporate Culture, and Regulatory Framework." This is shown by a significance value (Sig-value) of less than 0.05 ($p<0.05$). As shown in Table 8, the significance value for the departure from linearity exceeds 0.05 ($p > 0.05$), indicating that there is no statistically significant evidence of a non-linear relationship between the predicted performance and the predictor variables, namely; variables, namely Innovation practice, Corporate Culture, and Regulatory Framework, deviates from linearity. This means that the linear model which this study is using is appropriate for the data, as the lack of significant departure implies that the assumptions of linearity hold true.

Table 8: Linearity Results

Variable		**Sum of Squares**	**F**	**Sig.**
Organisational Performance * Innovation practice	Linearity	33.091	142.082	.000
	Deviation from Linearity	5.818	.892	.625

Variable		Sum of Squares	F	Sig.
Organisational Performance * Corporate Culture	Linearity	44.517	268.681	.000
	Deviation from Linearity	8.218	.973	.534
Organisational Performance * Regulatory Framework	Linearity	38.388	201.870	.000
	Deviation from Linearity	6.888	1.294	.165

4.3.2 Normality Test

As noted by Pallant (2010), many statistical methods—including correlation, regression, t-tests, and analysis of variance—are classified as parametric tests and rely on the assumption that the data follows a normal distribution or Gaussian distribution (named after Johann Karl Gauss, 1777–1855). This implies "that the populations from which the samples are drawn are assumed to follow a normal distribution. The assumption of normality is particularly crucial when establishing reference intervals for variables (Royston, 1991)." It is important to take normality and other assumptions seriously because failing to meet these assumptions can hinder the ability to draw accurate and reliable conclusions regarding the data (Oztuna, 2006). However, Elliott and Woodward (2007) suggest that with larger sample sizes (greater than 30 or 40), violations of the normality assumption may not pose significant issues; this indicates that parametric tests can still be utilized even if the data do not strictly adhere to a normal distribution. In this study, the sample size exceeded 40, thus necessitating the conduct of normality tests.

Normality can be assessed through visual inspection or via non-graphical statistical tests (Oztuna, 2006). While visual inspection of the distribution can provide insights into normality, it is often considered unreliable and does not guarantee a normal distribution. Graphical methods allow for a more intuitive assessment of normality, especially in cases where numerical tests may be overly sensitive or insufficiently sensitive. However, graphical approaches can lack objectivity. When data is presented visually, readers are empowered to evaluate the distribution assumption for themselves (Altman and Bland, 1996). Common graphical methods for evaluating normality include frequency distribution histograms, stem-and-leaf plots, boxplots, P-P plots (probability-probability plots), and Q-Q plots (quantile-quantile plots).

Non-graphical statistical tests for normality serve as complementary tools to graphical assessments (Elliott & Woodward, 2007). These statistical tests provide an objective evaluation of whether the data adheres to a normal distribution; however, they have their limitations. For instance, they may lack sensitivity with smaller sample sizes or may be overly sensitive when dealing with larger sample sizes. Consequently, “some statisticians prefer to rely on their experience and intuition to make subjective judgments based on visual representations of the data. Several key tests are commonly used to evaluate normality without graphical methods.” These include the Kolmogorov-Smirnov (K-S) test, Lilliefors corrected K-S test, Shapiro-Wilk test, Anderson-Darling test, Cramer-von Mises test, D’Agostino skewness test, Anscombe-Glynn kurtosis test, D’Agostino-Pearson omnibus test, and the Jarque-Bera test (Peat & Barton, 2005; Oztuna, 2006). Notably, the Kolmogorov-Smirnov and Shapiro-Wilk tests are commonly used and can be conveniently performed in SPSS. Accordingly, this study employed both graphical methods, specifically Quantile-Quantile (Q-Q) plots, and statistical tests, using the Shapiro-Wilk test to assess normality.

4.3.2.1 Quantile-Quantile (Q-Q) Plot

A Q-Q plot displays the quantiles (values that divide a dataset into equal parts) of the data. Q-Q plots are particularly easy to interpret for large sample sizes. For a dataset to be considered normally distributed, “the points in the Q-Q plot should lie close to the reference line without any clear pattern deviating from it.” In this study, SPSS version 28 was used to generate a Q-Q plot to assess the normality of the dependent variable, organizational performance. As shown in Figure 6, most of the points closely followed the line of best fit, indicating that the organizational performance variable was drawn from a normally distributed population.

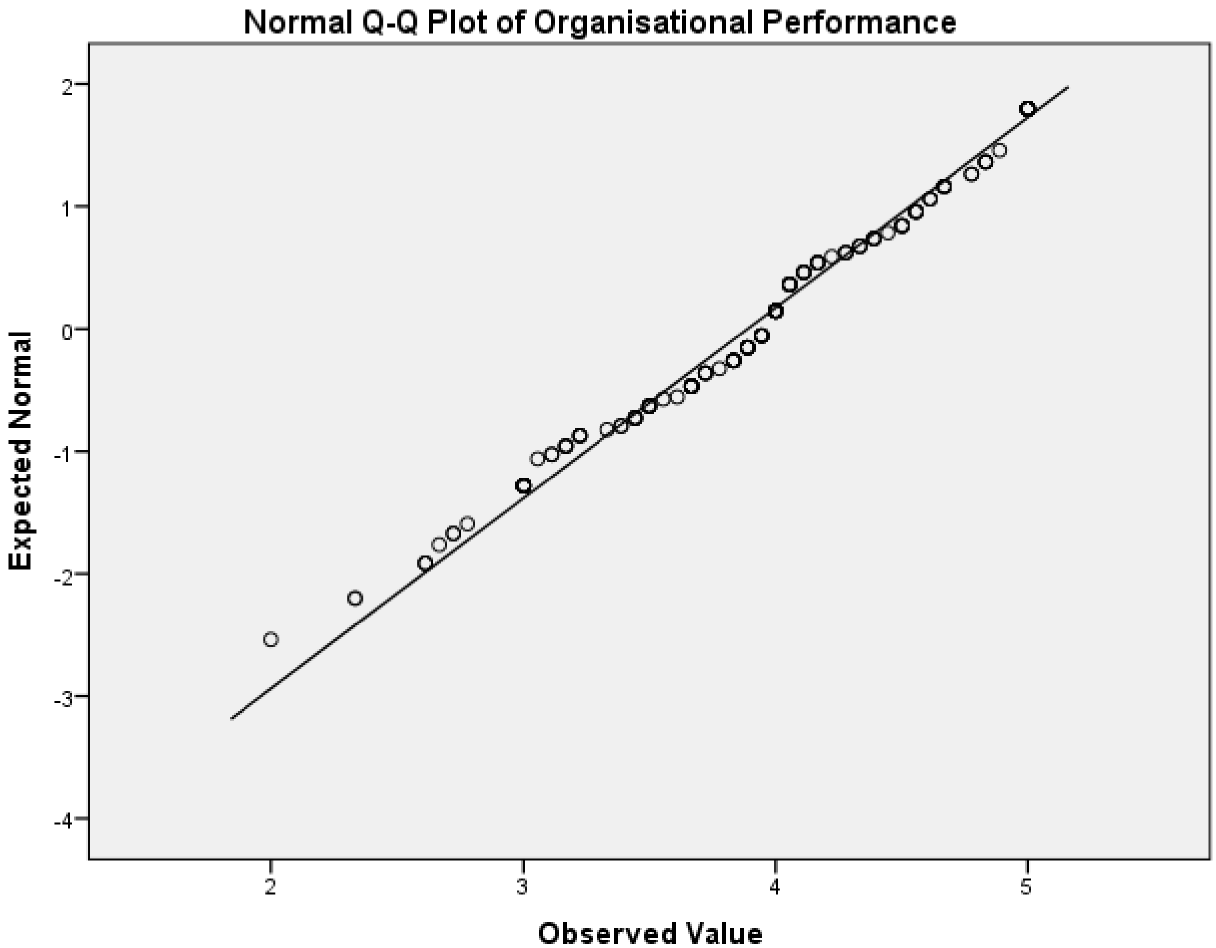


Figure 6: Organisational performance normal Q-Q Plot

4.3.2.2 Shapiro-Wilk test of normality

The Shapiro-Wilk test was conducted to evaluate the normality of the dependent variable across all levels of the independent variable in this study. This statistical test is specifically designed to assess whether a dataset is normally distributed, which is essential for fitting a linear model to the data (Ghasemi & Zahedias, 2012). The Shapiro-Wilk test analyzes the data to identify the presence of skewness or kurtosis, or both, thereby determining the degree of normality. This test operates by examining the correlation between the observed data values and their corresponding normal scores (Peat & Barton, 2005). It is known for its superior power compared to the Kolmogorov-Smirnov (K-S) test, even when the K-S test is adjusted with the Lilliefors correction (Steinskog, 2007). In fact, the Shapiro-Wilk test is one of the most commonly used methods for assessing normality, as it effectively detects deviations from a normal distribution

According to Thode (2002), many researchers consider the Shapiro-Wilk test to be the preferred method for assessing data normality. The test produces a statistic ranging from 0 to 1. "A significance value (Sig.) greater than 0.05 indicates that the data are normally distributed, whereas a value below 0.05 suggests a significant deviation from normality." The Shapiro-Wilk test results for this study are presented in Table 9.

Table 9: Shapiro-Wilk Test

Variable	Shapiro-Wilk (Sig.)
Innovation practice	0.172
Corporate Culture	0.231
Regulatory Framework	0.188
Organisational Performance	0.298

As shown in Table 9, the significance value (Sig.) from the Shapiro-Wilk test exceeds 0.05, indicating that the data are normally distributed. The normality test results for all study variables similarly showed Shapiro-Wilk statistics above 0.05, confirming that the assumption of normality was met and not violated across the variables.

4.3.3 Multi-Collinearity Test

As noted by Besley, Kuh, and Roy (1980), as referenced by Keraro (2014) and Opiyo (2017), identifying multicollinearity within a model is crucial. This can be assessed by examining diagnostic indicators such as tolerance and the variance inflation factor (VIF). Before establishing that any of the independent variables effectively predict organizational performance, it is essential to ensure that their variances are not overly overlapping—that is, the variables should not account for the same variance in organizational performance. "The variance inflation factor (VIF) measures the degree of multicollinearity present among the variables in a regression model. Essentially, the VIF diagnostic tool helps confirm that the independent variables do not overlap significantly or explain the same variance within the dependent variable." If they do, it could lead to an inflated representation of the variance explained by the model, as indicated by the R^2 (squared) value. Therefore, this study employed multicollinearity tests to determine whether high correlations existed between any independent variables.

According to Cohen et al. (2003), a tolerance level of 0.8 is suggested as a benchmark for identifying multicollinearity. Additionally, Hair et al. (2006) recommend that a VIF value below 10 indicates the absence of significant multicollinearity. Any VIF value exceeding 10 suggests substantial variance inflation, implying that the variable in question may be redundant due to its relationship with other variables. In this study, "a tolerance value below 0.8 and a VIF value below 10 were adopted as thresholds to indicate that multicollinearity was not a concern, suggesting no significant linear relationship among the independent variables." The tolerance and VIF for the study variables were assessed for multicollinearity, with the results presented in Table 10.

Table 10: Multicollinearity Test (Tolerance and VIF)

	Collinearity Statistics	
Research Variables	**Tolerance**	**VIF**
Innovation practice	.395	2.530
Corporate Culture	.459	2.180
Regulatory Framework	.331	3.019

Dependent Variable: organisational performance

Table 10 presents the tolerance and VIF values for the independent variables in relation to the dependent variable. The values are as follows: Innovation Practice – Tolerance [0.395] and VIF [2.530]; Corporate Culture – Tolerance [0.459] and VIF [2.180]; Regulatory Framework – Tolerance [0.331] and VIF [23.019]. Based on these results, "the study concluded that there was no evidence of multicollinearity among the independent and dependent variables."

4.3.4 Test of Homoscedasticity

As noted by Todd Daniel (2015), the Levene test is designed to assess whether the variances of two samples or groups are approximately equal, which is referred to as homogeneity of variance. The independent samples t-test operates under the assumption that the variances of the sample groups are similar, or that the samples exhibit homogeneity of variance, meaning their variances are of the same nature. The Levene test specifically evaluates this assumption by starting with a null hypothesis that asserts there is no significant difference between the variances of the first group and the second group. The goal of the Levene test is to confirm that the variances are indeed equal; therefore, a non-significant result from the Levene test is preferred. This non-significance indicates that the assumption of equal variances for the independent samples t-test holds true, meaning we do not want the variances to differ. In SPSS, the Levene test is automatically conducted whenever an independent samples t-test is performed. If the significance value (Sig.) is greater than 0.05, it indicates that the Levene test is non-significant, and we can assume equal variances across the groups.

Table 11: Tests for Homogeneity of Variances

Variable	Levene's Statistic	df1	df2	Sig.	Comment
Innovation practice	1.265	23	149	.201	p>0.05 hence equal variance
Corporate Culture	1.371	24	149	.220	p>0.05 hence equal variance
Regulatory Framework	.958	25	149	.526	p>0.05 hence equal variance

Dependent Variable: organisational performance

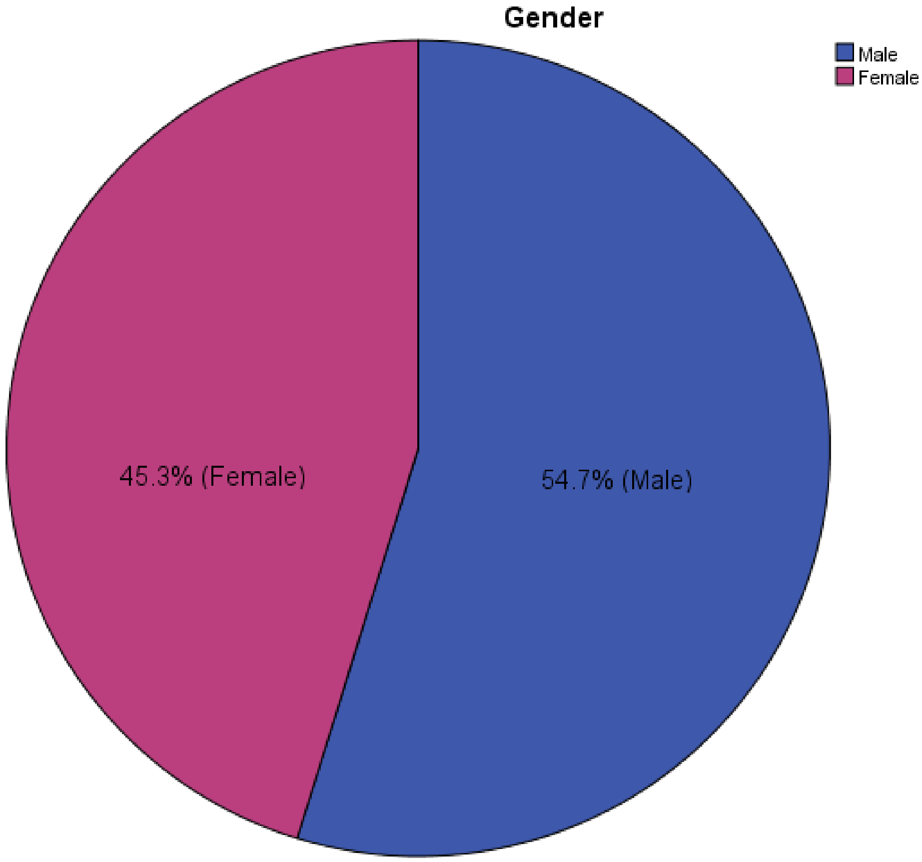
The results in Table 1 “show the outcomes of the homogeneity tests, with Levene’s test yielding significant p-values of 0.201 for Innovation Practice, 0.220 for Corporate Culture, and 0.526 for Regulatory Framework. Since all p-values exceed 0.05, the results indicate that the test was not significant at the $\alpha \leq 0.05$ level, confirming that the assumption of homogeneity of variances was met. Levene’s test for equality of variances, as shown in Table 12, was used to assess homogeneity. The Levene statistics recorded were 1.265 for Innovation practice, 1.371 for Corporate Culture, and 0.958 for the Regulatory Framework.” Since all of the Levene statistics were below 5, it indicates that the research data meets the assumptions of homogeneity of variances. Homoscedasticity refers to a condition where the variance of the dependent variable remains consistent across the dataset (Ghasemi & Zahediasal, 2012). In contrast, heteroscedasticity suggests that the variance of the dependent variable fluctuates across the data.

4.4 Demographic Information of the respondents

As noted by Carol (2011), demographic information is crucial as it offers insights into the characteristics of research participants. This data is essential for determining whether the individuals included in a study represent the broader target population, which is necessary for making generalizations about the findings. Furthermore, a comprehensive description of the participants enables both readers and researchers to identify the populations to which the research results can be applied, facilitating comparisons across various studies. Respondents' demographic characteristics are important because they enable a detailed analysis of the study data, considering the differences and similarities associated with these traits. This helps in better understanding the research findings, highlighting variations both between and within groups based on factors such as gender, age, experience, and other relevant demographic variables. Additionally, demographic attributes are instrumental in providing the necessary information for conducting research syntheses and secondary data analyses (Bein, 2009). By examining, "demographic information, one can gain a clearer understanding of key background characteristics of an audience, including gender, age, race, ethnicity, income, employment status, and marital status." This understanding is essential for interpreting research findings and applying them effectively in various contexts.

4.4.1 Gender of the Respondents

The study sought to "assess the gender composition of respondents from commercial state corporations in Kenya." Participants were asked to indicate their gender, and as illustrated in Figure 7, 54.7% were male, while 45.3% were female. This distribution indicates a relatively balanced representation of both genders within the study, suggesting minimal disparity. This balance may be attributed to the nature of roles in commercial state corporations in Kenya, which tend to appeal to both men and women equally. Furthermore, the analysis suggests that the workforce in Kenya's commercial state corporations is gender-neutral, promoting an inclusive environment. Gender diversity within organizations fosters a variety of perspectives, resulting in a more comprehensive examination of the challenges faced by the company. Such diversity fosters increased collaboration and innovation, which can strengthen decision-making and enhance overall organizational performance and service



delivery.

Figure 7: Respondents Gender

4.4.2 Age distribution of the respondents

Employee age within an organization is a significant consideration, as it influences their capacity to understand and respond to their environment. This, in turn, affects their adaptability to changes and the decisions they make, which ultimately impact organizational performance. The findings regarding respondents' ages are depicted in Figure 8. The analysis revealed that 0.6% of the workforce is less than 25 years old, while 27.4% are within the 26-35 age range. Additionally, 39.7% of workforce fall between the ages of 36-45, and finally 32.4% are aged over 45 years and above. These findings provide a detailed overview of the age distribution within commercial state corporations in Kenya, emphasizing workforce diversity and its possible impact on organizational dynamics and effectiveness.

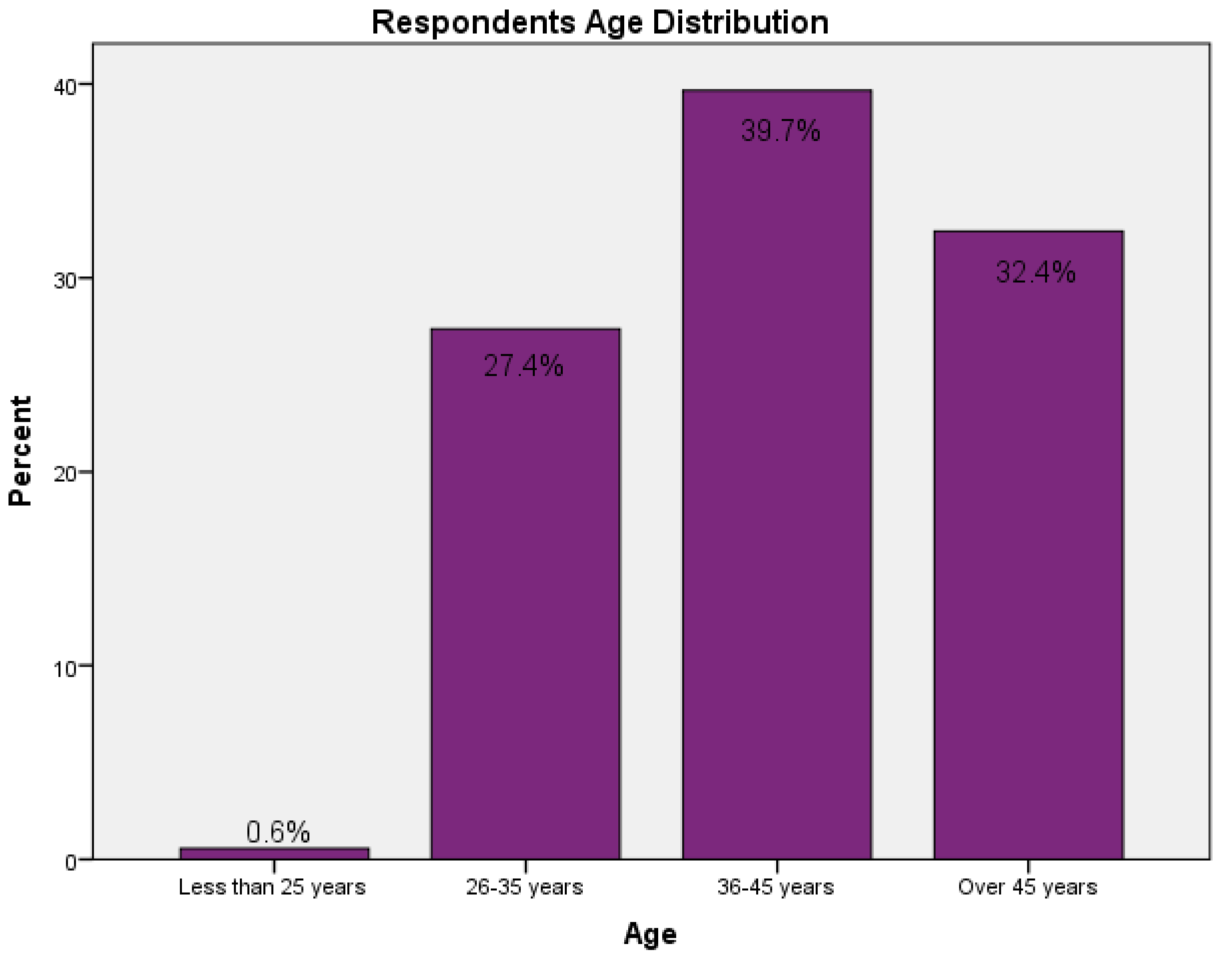


Figure 8: Respondents Age Distribution

Therefore, 72.1% percent of the respondents were aged between 36 and 45 years. The age distribution suggests that while there is a solid base of experienced employees, the lack of younger individuals may hinder the organizations' ability to innovate and adapt to changing environments. A diverse age range can enhance creativity and problem-solving, as different age groups bring varied experiences and viewpoints. Commercial state corporations seeking to enhance their performance through innovation and foster a strong organizational culture can consider adopting strategies to attract younger professionals. This approach may include building an inclusive workplace that recognizes and values the input of employees across all age groups while promoting mentorship programs to facilitate collaboration between senior and junior team members.

4.4.3 Education Level

The study also aimed to determine the educational qualifications of employees in commercial state corporations in Kenya. The distribution of respondents' educational backgrounds is shown in Figure 9. The results indicate that "the majority of staff (57.5%) hold a bachelor's degree as their highest qualification, 24% have a master's degree, 2.8% possess a PhD, and 15.6% hold a diploma."

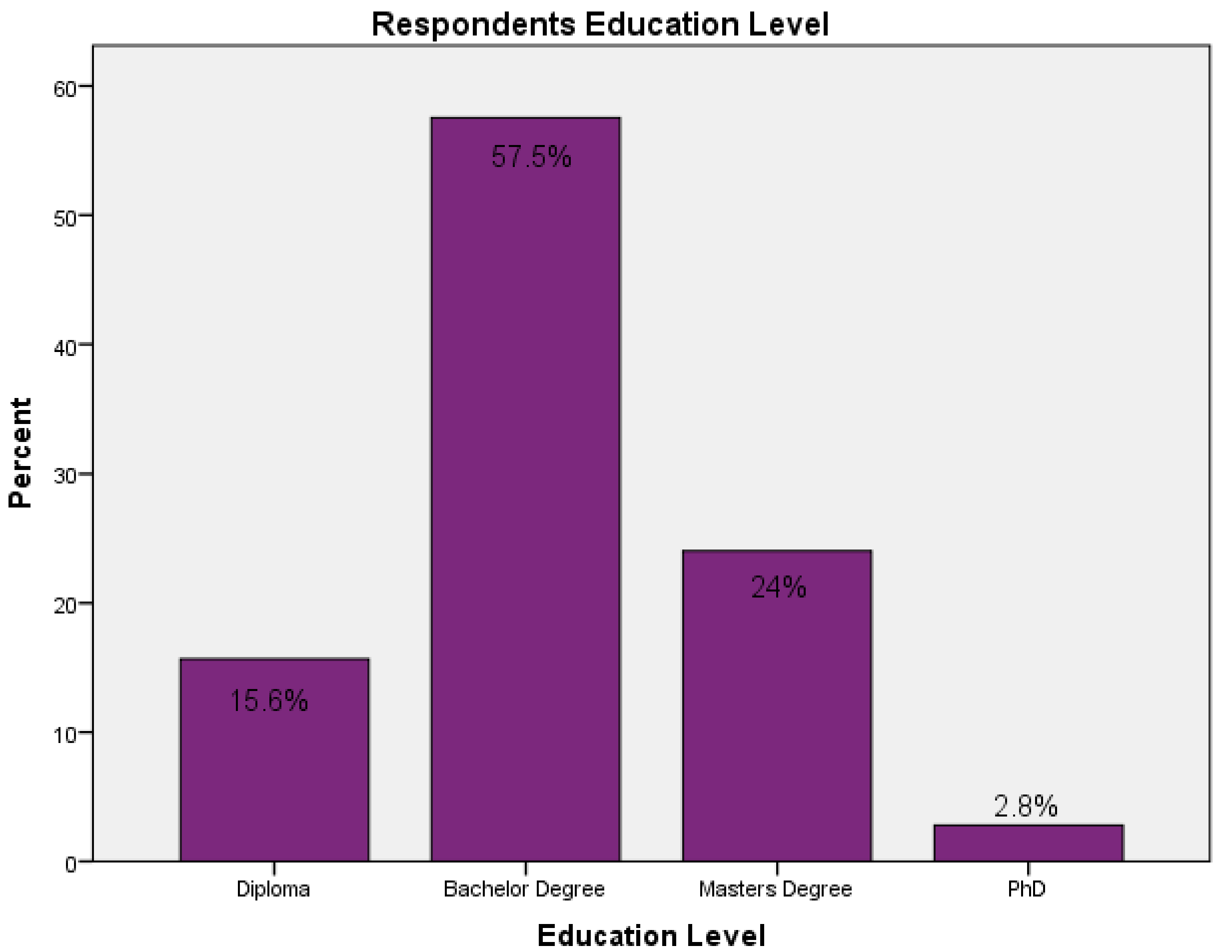


Figure 9: Respondents Education Level

The results provide a clear picture of the educational qualifications of staff within commercial state corporations, highlighting the distribution of academic achievements among employees. The majority, 57.5%, of the workforce holds a bachelor's degree as their highest qualification. This indicates that undergraduate education forms the backbone of the workforce, suggesting that most roles within these corporations require a foundational level of academic knowledge and skills typically associated with bachelor's degree holders. A smaller but significant proportion, 24%, of the respondents have attained a master's degree. This group likely represents employees with advanced expertise and specialized knowledge, which could contribute to strategic decision-making and innovation within the corporations. However, only 2.8% of the staff hold a PhD, indicating that highly specialized or research-oriented roles are relatively rare. This could reflect a limited focus on research-intensive activities or a need for further investment in fostering advanced academic qualifications among employees. Additionally, 15.6% of the workforce holds a diploma qualification, which suggests that a notable portion of employees are equipped with practical or technical training. These individuals likely play a critical role in operational and technical tasks, supporting the day-to-day functioning of the corporations.

4.4.4 Years worked in the organisation.

The study also examined the respondents' length of service in their organizations. Figure 10 summarizes their tenure. According to the results, 4.5% of respondents had worked for less than one year, 12.8% had 1–5 years of service, 24.6% had 6–10 years, 31.3% had 11–15 years, and 26.8% had over 15 years of experience. These findings indicate that most respondents possessed substantial experience within the commercial state corporations in Kenya. The predominance of long-serving employees suggests that while there is a wealth of experience, there may also be challenges in adapting to new regulatory frameworks and innovative practices. Organizations may benefit from fostering an environment that encourages knowledge sharing and collaboration between experienced employees and newer staff to enhance innovation.

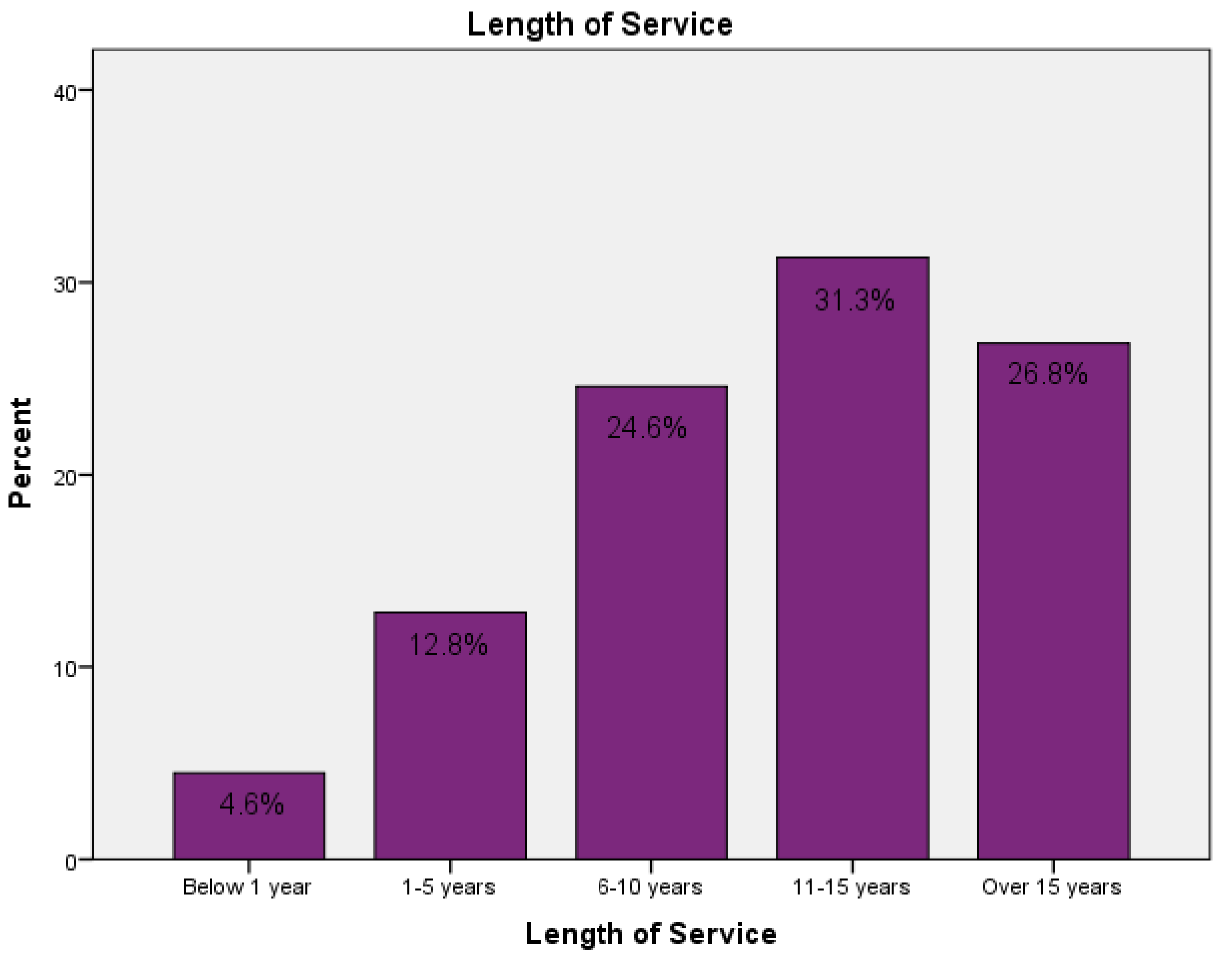


Figure 10: Respondents Length of Service

To improve performance through innovation, commercial state corporations might consider strategies to attract and retain younger talent. This could involve creating mentorship programs that pair experienced employees with newer staff, thereby facilitating the transfer of knowledge while also encouraging the infusion of new ideas and approaches.

4.4.5 Position in the organisation.

The study sought to find out the position of the respondents in the organisation. Figure 11 shows a summary of positions held by the respondents in the organisation.

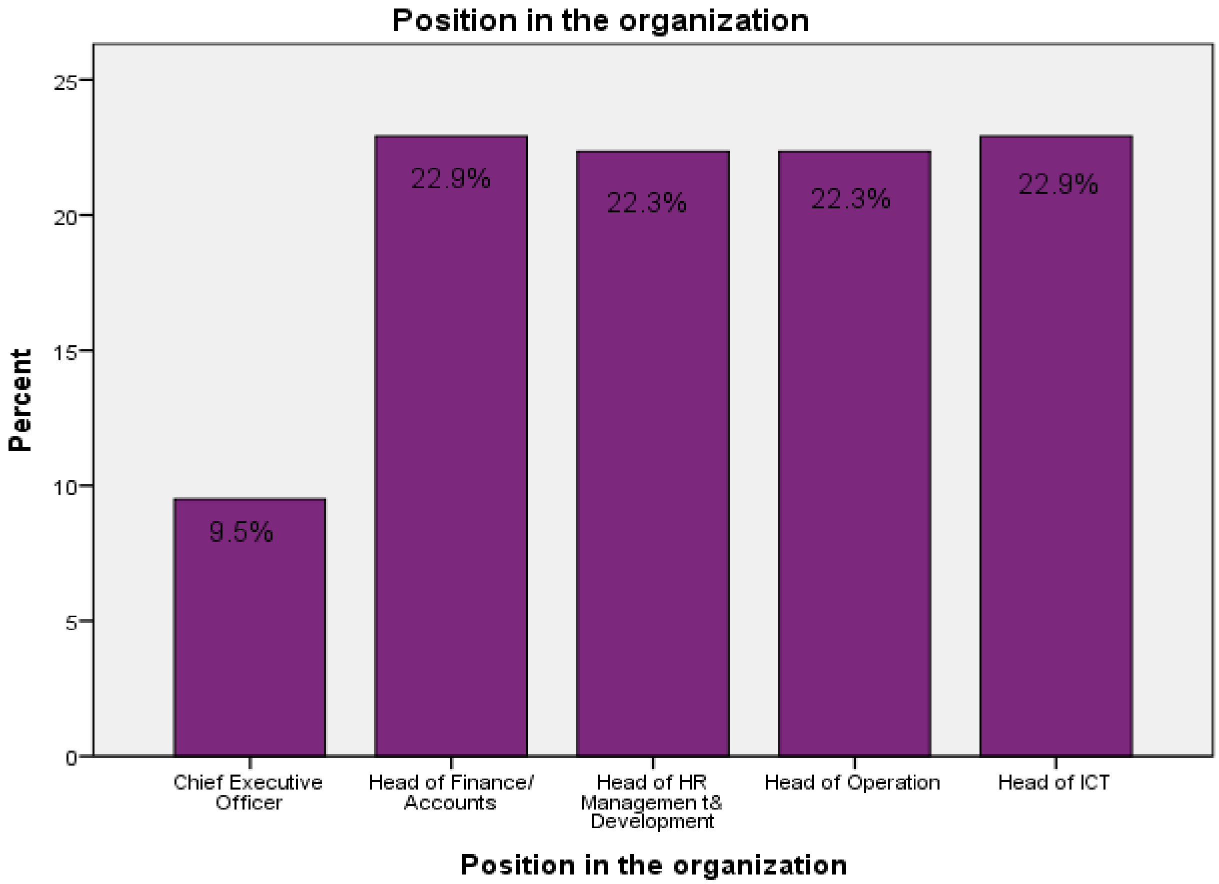


Figure 11: Position in the organization

The result in figure 11 shows that 9.5% of the respondents were chief executive officers in the organisation while 22.9% of the respondents were the head of finance/account and that 22.3% of the respondents were head of Human Resource Management and Development at the commercial state corporations in Kenya. Further 22.3% of the respondents were Head of operations and 22.9% were Head of ICT at the commercial state corporations in Kenya. These results shows that the diverse representation of management positions suggests that the study captured a wide range of perspectives on how innovation practices are perceived and enacted within the organization. The insights from various functional heads can provide a holistic view of the organizational culture and its readiness for innovation. For commercial state corporations seeking to improve performance through innovation, it is crucial to utilize the expertise and perspectives of individuals in key positions. Involving leaders from various departments in conversations about innovation can help create a collaborative atmosphere that promotes cross-functional projects. Moreover, "gaining a clear understanding of the specific challenges and opportunities within each department allows for the development of strategies that are both aligned with the organization's corporate culture and compliant with its regulatory environment."

4.5 Descriptive Analysis

This section presents an overview of the, "descriptive statistics for the variables analyzed in the study. Corporate culture was identified as the independent variable, innovation practice as the mediating variable, the regulatory framework as the moderating variable, and organizational performance as the dependent variable." All data were measured using a five-point Likert scale throughout the research. Descriptive statistics were calculated to summarize responses for each construct, with measures of central tendency including the mean, median, and mode, and variability assessed through the standard deviation (Mugenda & Mugenda, 2013). The mean was adopted as the principal measure for interpretation because it captures the average score across all respondents and is widely used in social science research (Kothari, 2019). However, to strengthen reliability, median and mode values are also reported, thereby providing a fuller picture of data distribution and addressing potential effects of skewness.

4.5.1 Descriptive analysis for Corporate Culture

The study aimed to, "assess respondents' perceptions of different aspects of Corporate Culture in commercial state corporations in Kenya. The Corporate Culture construct comprised four indicators: Clan culture, Adhocracy culture, Market culture, and Hierarchy culture. Respondents rated these aspects on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) as they are reflected in the commercial state corporations." The descriptive statistics offer an understanding of how these cultural dimensions are perceived within the organizations.

Table 12: Corporate Culture Descriptive statistics

Statement	Mean	Std. Deviation
CC_HRCH_CULT_23_Management style in the organisation is exemplified by security of tenure	4.06	.869

Statement	Mean	Std. Deviation
CC_ADH_CULT_12_In the organisation, originality and search for opportunities are valued.	4.03	.838
CC_CLN_CULT_1_The management approach in my organisation is exemplified by teamwork available	4.01	.918
CC_HRCH_CULT_22_The glue that binds the organisation together is prescribed regulations	4.01	.871
CC_CLN_CULT_2_The glue that binds the organisation together is mutual trust	4.01	.927
CC_ADH_CULT_10_One of the strategic priorities in the organisation is acquirement of latest resources	3.99	.818
CC_CLN_CULT_4_The organisation is an individual place like an extended family	3.99	.893
CC_CLN_CULT_5_The leadership in my organisation exemplifies mentoring and nurturing characteristics	3.98	.890
CC_ADH_CULT_9_Operations in the organisation are exemplified by entrepreneurship spirit	3.98	.838
CC_MKT_CULT_20_In the organisation, measurement of targets and objectives is undertaken on regular basis	3.98	.871
CC_CLN_CULT_6_Great importance is given to commitment in my organisation	3.98	.887
CC_ADH_CULT_11_The glue that binds the organisation together is obligation to originality and improvement wrong	3.97	.841
CC_MKT_CULT_21_Management style in the organisation is characterized by goal achievement.	3.95	.901
CC_CLN_CULT_7_The organisation defines achievement on the foundation of concern for employees	3.92	.883
CC_MKT_CULT_17_Management in the organisation is illustrated by having results-oriented focus.	3.92	.858

Statement	Mean	Std. Deviation
CC_CLN_CULT_3_The organisation emphasizes human resources development as one of the success factors	3.91	.920
CC_MKT_CULT_18_The organisation defines achievement on the foundation of increasing the number of customers	3.91	.866
CC_MKT_CULT_16_Management of employees in the organisation is exemplified by encouragement of competitive spirit	3.90	.855
CC_MKT_CULT_15_The glue that binds the organisation together is stress on goal achievement.	3.89	.858
CC_ADH_CULT_8_The management of employees in the organisation is characterized by promotion of individual initiative	3.89	.867
CC_ADH_CULT_14_In the organisation, there is commitment to creation of new ways of providing services to customers	3.88	.872
CC_ADH_CULT_13_The organisation stresses that expansion and promptness to encounter any forthcoming challenges are vital.	3.87	.861
CC_MKT_CULT_19_Managers and subordinates jointly set goals that are ambitious but realistic.	3.85	.855
Sum Average	**3.95**	**.872**

Valid N (listwise) =179

Results in table 12 gives an aggregate mean score of 3.95 and a standard deviation of 0.872. The mean scores for several statements related to corporate culture are notably high, with the highest being 4.06 for "Management style in the organization is exemplified by security of tenure." This indicates that respondents feel secure in their positions, a critical aspect of a supportive corporate culture. Similarly, the statement "In the organization, originality and search for opportunities are valued received a mean score of 4.03, suggesting that innovation and proactive behavior are encouraged." These high ratings reflect a strong belief in the positive aspects of corporate culture within these organizations. Additionally, the statements regarding teamwork and mutual trust, both scoring 4.01, underscore the significance of collaborative relationships within the organization. The emphasis on teamwork indicates that employees value working together towards common goals, which can enhance overall performance. Furthermore, mutual trust is essential for fostering a positive work environment, as it encourages open communication and collaboration among team members.

The mean scores for statements related to Adhocracy culture reveal a recognition of the importance of innovation and adaptability, with "One of the strategic priorities in the organization is the acquirement of the latest resources" receiving a score of 3.99 and "Operations in the organization are exemplified by an entrepreneurial spirit" scoring 3.98. This culture type encourages organizations to be flexible and responsive to changes in the market, which is crucial for maintaining competitiveness. In contrast, the focus on Market culture is reflected in statements such as "In the organization, measurement of targets and objectives is undertaken on a regular basis," which received a score of 3.98, and "Management style in the organization is characterized by goal achievement," scoring 3.95. These results indicate a results-oriented approach, suggesting that organizations prioritize performance metrics and goal attainment, thereby driving productivity and enhancing overall effectiveness. However, while many statements received high ratings, some aspects of corporate culture garnered more moderate scores. The statement "Managers and subordinates jointly set goals that are ambitious but realistic" scored 3.85, indicating that although there is some collaboration in goal-setting, there is room for improvement in ensuring that these goals are both challenging and achievable. Additionally, the statement "The organization stresses that expansion and promptness to encounter any forthcoming challenges are vital" received a score of 3.87, suggesting that while there is an awareness of the need for agility, this awareness may not be fully realized in practice. The average score of 3.95 across all indicators reveals a generally positive perception of corporate culture among respondents, highlighting its significance as a factor influencing the performance of commercial state corporations in Kenya. These findings suggest that cultivating a strong corporate culture, characterized by teamwork, trust, innovation, and a focus on results, can significantly enhance organizational performance. By prioritizing these cultural elements, corporations can improve their effectiveness and drive better outcomes in their operations.

4.5.2 Descriptive analysis for Innovation practice

The study aimed to evaluate respondents' perceptions of different aspects of Innovation Practice within commercial state corporations in Kenya. "The Innovation practice composite variable is made up of four (4) indicators namely; process innovation practice, product innovation practice, marketing innovation practice and organisational innovation practice. Respondents were requested to rate the aspects of Innovation Practice on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), based on their application within commercial state corporations in Kenya."

Table 13: Innovation practice descriptive statistics

Statement	Mean	Std. Deviation
INV_PR_MKTINN_22_Market innovation practice plays a crucial role in fulfilling market needs in the organisation	4.27	.818
INV_PR_PRDTINN_10_A firm that is constantly introducing new product offerings is more likely to achieve higher sales volumes	4.27	.818
INV_PR_MKTINN_21_Market innovation practice enhance competitiveness of the organisation	4.23	.848
INV_PR_PRCINN_9_Process innovation practice enhance customer loyalty to the organisation	4.23	.848
INV_PR_MKTINN_20_The use of technology lead to the development of new ways to market the organisation	4.18	.890
INV_PR_PRCINN_8_Process innovation practice increase the market share of the organisation	4.18	.890
INV_PR_MKTINN_18_Market Innovation practice enhances customer needs in the organisation	4.16	.900
INV_PR_PRCINN_6_Process innovation practice enhance product innovation practice in the organisation	4.16	.900
INV_PR_PRDTINN_13_New product positively influences the organisation's profitability	4.10	.829

Statement	Mean	Std. Deviation
INV_PR_PRCINN_1_Our company has invested in process innovation practice	4.10	.829
INV_PR_PRDTINN_16_Our organisation has invested in Product innovation practice	4.07	.868
INV_PR_PRCINN_4_Process innovation practice enhance business processing reengineering in the organisation	4.07	.868
INV_PR_MKTINN_17_Our organisation has invested in Market innovation practice	4.01	.855
INV_PR_PRCINN_5_Process innovation practice enhance employee participation and commitment in the organisation	4.01	.855
INV_PR_PRDTINN_14_Firms that consistently seek to offer improved products are more likely to attract new customers as well as retain the existing ones	3.98	.811
INV_PR_PRCINN_2_Process innovation practice decreases cost of operations in the organisation	3.98	.811
INV_PR_PRDTINN_15_Adoption of continuous improvement on the product offering is a sure way to increase a firm's profitability	3.98	.814
INV_PR_PRCINN_3_Process innovation practice enhance quality of products and services provided by the organisation	3.98	.814
INV_PR_MKTINN_19_Market Innovation practice leads to opening up new markets for the organisation	3.97	.851
INV_PR_PRCINN_7_Process innovation practice enhance competitiveness of the organisation	3.97	.851
INV_PR_MKTINN_24_Market innovation practice enhance survival for organisation in an environment of fasting changing market	3.84	.913
INV_PR_PRDTINN_12_Improved products positively and significantly influences the sales volumes	3.84	.913
INV_PR_MKTINN_23_Market innovation practice plays a crucial	3.83	.982

Statement	Mean	Std. Deviation
role in responding to market opportunities for the organisation		
INV_PR_PRDTINN_11_A business firm that frequently introduces new products is more likely to retain and attract more customers	3.83	.982
Sum Average	**4.05**	**.865**

Valid N (listwise)=179

The results in Table 13 show an overall mean score of 4.05 and a standard deviation of 0.865. Most statements have relatively high mean scores, with several items exceeding a score of 4.0. For instance, both "Market innovation practice plays a crucial role in fulfilling market needs in the organization" and "A firm that is constantly introducing new product offerings is more likely to achieve higher sales volumes received a mean score of 4.27." This indicates a strong consensus among respondents that market innovation is critical for meeting customer demands and driving sales growth. Such high ratings suggest that respondents believe innovation is integral to the operational success of their organizations." The standard deviations for these items are relatively low, ranging from .818 to .900, which implies that there is a consistent agreement among respondents regarding the importance of these innovation practices. Low variability in responses indicates that the perceptions of innovation's role in enhancing competitiveness and fulfilling market needs are widely shared across the sample.

The impact of process innovation is notable, as evidenced by high mean scores of 4.23 for statements indicating that "Process innovation practice enhances customer loyalty to the organization" and "Process innovation practice increases the market share of the organization." These results reflect a strong belief among respondents that improving internal processes not only fosters customer loyalty but also contributes to expanding market presence, thereby underscoring the perceived value of process innovation in enhancing organizational performance. Similarly, the mean score of 4.18 for the statement "The use of technology leads to the development of new ways to market the organization" demonstrates that respondents recognize the significant role of technology in facilitating innovative marketing strategies. This finding highlights the necessity of integrating technological advancements into marketing practices to remain competitive in a rapidly changing environment.

However, while many statements received high ratings, some aspects garnered moderate agreement. The statements "Market innovation practice enhances survival for the organization in an environment of fast-changing markets" and "Improved products positively and significantly influence sales volumes" scored lower at 3.84. This suggests that, although there is consensus on the importance of innovation, there may be reservations or variability in how strongly respondents feel about these particular aspects. It indicates that while innovation is widely acknowledged as beneficial, its direct impact on survival and sales may not be universally recognized. The overall findings from the descriptive analysis indicate that innovation practices are considered essential for enhancing the performance of commercial state corporations in Kenya. The strong mean scores across various dimensions of innovation reflect a collective recognition among respondents of the necessity for continuous improvement and adaptation in response to evolving market demands. By embracing innovation, these corporations can better position themselves to meet challenges and capitalize on opportunities in a competitive landscape.

4.5.3 Descriptive analysis for regulatory framework

The study aimed to examine respondents’ perceptions of different aspects of the regulatory framework within commercial state corporations in Kenya. The regulatory framework composite variable is made up of three (3) indicators namely; Legal framework on institutional structure, Performance monitoring and Control and transparency of operational performance. Respondents were asked to evaluate aspects of Corporate Culture using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), as they are implemented in commercial state corporations in Kenya.. The descriptive statistics provide insights into how this Regulatory framework dimensions are perceived within the organizations.

Table 15: Regulatory framework Descriptive statistics

Statement	Mean	Std. Deviation

Statement	Mean	Std. Deviation
REG_FRM_CONT_TRANS_16_Compliance with Mwongozo, strengthens boards, ensure effective oversight and increases operational efficiency	4.23	.848
REG_FRM_CONT_TRANS_15_Public Investment Committee should review all key reports submitted to them to hold the government's executive branch to account for its SC-related fiscal and expenditure policies and implementation	4.18	.890
REG_FRM_PRM_MON_7_Adoption of an IT-system to automate and systemize data collection to address the limitations of manual data collection and related challenges	4.03	.896
REG_FRM_PRM_MON_5_There exists key challenge in reliable and timely data to support sound policymaking	3.98	.845
REG_FRM_CONT_TRANS_14_Improve the quantification of fiscal risks and the comprehensiveness of analysis in the Statement of Specific Fiscal Risks in the annex of the annual budget policy statement	3.97	.851
REG_FRM_PRM_MON_6_Data collection, quality and analysis challenges should be addressed through staffing and skills to increase the analytical capacity of National Treasury and the Inspectorate of State Corporations	3.94	.894
REG_FRM_LGL_FRM_4_Harmonize the legal framework to provide for a consistent legal foundation for the exercise of oversight functions and its relations with commercial state corporations oversight functions by other mandated government institution	3.92	.886
REG_FRM_LGL_FRM_1_There is lack of a clear and consistently applied classification among oversight institutions which hampers oversight	3.87	.912
REG_FRM_LGL_FRM_2_There is lack of a clear and consistently applied classification among departments which impedes transparency	3.81	.999
REG_FRM_LGL_FRM_3_There is lack of a clear and consistently applied classification in reports which complicates fiscal reporting	3.77	.943
REG_FRM_PRM_MON_10_There should be a well streamlined performance contracting processes by reducing reporting lines and agencies involved	2.73	.998

Statement	Mean	Std. Deviation
REG_FRM_PRM_MON_8_Adoption of an IT-system in order to upgrade financial and fiscal risk monitoring and management and improve the reliability and timeliness of data.	1.90	.601
Sum Average	**3.69**	**.880**

Valid N (listwise)= 179

Results in table 14 gives an aggregate mean score of 3.69 and a standard deviation of 0.880. The statement "Compliance with Mwongozo strengthens boards, ensures effective oversight, and increases operational efficiency" “received the highest mean score of 4.23, indicating that respondents strongly believe adherence to Mwongozo, a governance framework for state corporations, is crucial for enhancing board effectiveness and improving overall operational efficiency. This high rating highlights the recognition of the importance of regulatory compliance in fostering good governance practices.” Additionally, the statement "Public Investment Committee should review all key reports submitted to them to hold the government’s executive branch to account for its SC-related fiscal and expenditure policies and implementation" scored 4.18, reflecting a strong belief in the necessity of accountability mechanisms within the regulatory framework. Respondents demonstrate a clear value for the role of oversight committees in ensuring that fiscal policies and expenditures are properly managed, which is essential for maintaining transparency and accountability in state corporations.

The mean score of 4.03 for the statement "Adoption of an IT system to automate and systemize data collection to address the limitations of manual data collection and related challenges" indicates a recognition of the importance of technology in enhancing performance monitoring. This suggests that respondents value the modernization of data collection processes to improve accuracy and efficiency, ultimately leading to better decision-making and performance outcomes. However, the statement "There exists key challenges in reliable and timely data to support sound policymaking" received a mean score of 3.98, indicating that while there is acknowledgment of the importance of data for effective policymaking, respondents also recognize existing challenges in obtaining reliable and timely information. This highlights a critical area for improvement within the regulatory framework, as sound policymaking heavily relies on accurate data. Notably, the statement "There should be a well-streamlined performance contracting process by reducing reporting lines and agencies involved" received a significantly lower score of 2.73, indicating that respondents feel there are substantial inefficiencies in the current performance contracting processes. Additionally, the statement "Adoption of an IT system in order to upgrade financial and fiscal risk monitoring and management and improve the reliability and timeliness of data" scored only 1.90, suggesting a strong sentiment that current efforts to implement technology for monitoring and management are inadequate. These low scores highlight critical areas where improvements are necessary to enhance the effectiveness of the regulatory framework.

Furthermore, several statements related to the legal framework and transparency received moderate scores. For instance, the statement "Harmonize the legal framework to provide for a consistent legal foundation for the exercise of oversight functions" scored 3.92, while "There is lack of a clear and consistently applied classification among oversight institutions which hampers oversight" received 3.87. These scores suggest that, although there is some recognition of the need for a coherent legal framework, concerns about inconsistencies may hinder effective oversight and transparency. The average score of 3.69 across all indicators reflects a generally positive perception of the regulatory framework, yet it also highlights significant opportunities for improvement. The findings suggest that while there is strong support for compliance and accountability mechanisms, challenges persist in areas such as data reliability, legal harmonization, and the efficiency of performance monitoring processes. Addressing these challenges was essential for enhancing the overall effectiveness of the regulatory framework and ensuring that it meets the needs of all stakeholders involved.

4.5.4 Descriptive analysis for organisational performance

The organizational performance variable was treated as a composite construct, assessed through three key dimensions: financial performance, business performance, and overall organizational performance. Respondents rated factors reflecting the performance of commercial state corporations in Kenya on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Table 15 presents the ranking of the various organizational performance items, offering insights into how these corporations are perceived in comparison to their competitors.

Table 15: Organizational performance Descriptive statistics

Statement	Mean	Std. Deviation
ORG_PERF_FIN_1_The organisation’s sales growth rate will be higher than that of the competitors	3.99	.909
ORG_PERF_BUS_7_The organisation will have an increase in the market share	3.97	.873
ORG_PERF_BUS_13_The organisation’s employee morale is higher than that of the competitors	3.96	.970
ORG_PERF_FIN_2_The organisation profitability will increase over the next five years	3.93	.868
ORG_PERF_BUS_12_The organisation’s attraction to professionals was higher than that of the competitors	3.92	.899
ORG_PERF_FIN_6-The organisation’s employee productivity will be higher than that of the competitors	3.91	.823
ORG_PERF_ORG_14_The organisation will have efficiency in operations	3.91	.898
ORG_PERF_FIN_5-The organisation’s return on investment is higher than that of the competitors	3.89	.890
ORG_PERF_ORG_17_The organisation's staff turnover is lower than that of the competitors	3.88	.832
ORG_PERF_FIN_3_The organisation sales revenue will increase over the years	3.88	.865
ORG_PERF_BUS_9_The brand image of the organisation will improve	3.87	.861
ORG_PERF_FIN_4_The organisation’s after-tax net income growth rate will be higher than that of the competitors	3.87	.877
ORG_PERF_ORG_16_The reputation of the organisation will recover	3.85	.758

Statement	Mean	Std. Deviation
ORG_PERF_ORG_15-There will be better service delivery in the organisation	3.85	.894
ORG_PERF_BUS_10_The organisation will have access to new markets	3.85	.933
ORG_PERF_BUS_8_The customers are expected to increase over the coming years	3.83	.927
ORG_PERF_BUS_11_There will be development of new products in the organisation	3.83	1.003
ORG_PERF_ORG_18_The organisation's market share is higher than that of the competitors	3.83	.873
Sum Average	**3.89**	**.886**

Valid N (listwise)= 179

The average score across all indicators was 3.89, reflecting a generally positive perception of organizational performance among respondents. This suggests that commercial state corporations in Kenya are viewed favorably regarding their financial, business, and operational capabilities. However, despite the predominantly positive scores, there are areas identified for potential improvement. For instance, the statement "There will be development of new products in the organization" received a score of 3.83, indicating that while the outlook is positive, innovation may not be as robust as desired. This highlights a critical area for strategic focus to ensure ongoing competitiveness in the market.

The financial performance indicators reflect a strong belief among respondents regarding the organization's competitive edge. The statement "The organisation's sales growth rate will be higher than that of the competitors" received a mean score of 3.99, suggesting significant confidence in the organization's ability to effectively generate revenue. Similarly, the statement "The organisation profitability will increase over the next five years" scored 3.93, indicating optimism about future profitability and a perception that the organization is on a positive trajectory in terms of its financial health. Additionally, other financial indicators, such as "The organisation's return on investment is higher than that of the competitors," which received a mean score of 3.89, and "The organisation's after-tax net income growth rate will be higher than that of the competitors," with a mean score of 3.87, further reinforce the overall perception of strong financial performance relative to its competitors.

The business performance indicators highlight a positive outlook regarding the organization's growth and internal environment. The mean score of 3.97 for the statement "The organisation will have an increase in the market share" suggests that respondents anticipate significant growth in the organization's market presence, which is crucial for long-term sustainability and competitiveness. Furthermore, the statement "The organisation’s employee morale is higher than that of the competitors," which received a score of 3.96, indicates that respondents believe the organization fosters a positive work environment that enhances employee satisfaction and productivity, as high employee morale is often linked to better performance outcomes. Additionally, the statement "The organisation will have access to new markets," which scored 3.85, reflects optimism about the organization's ability to expand its reach and explore new business opportunities. Together, these indicators suggest a robust perception of the organization's potential for growth and effectiveness in maintaining a motivated workforce.

The organizational performance indicators illustrate a positive perception of the organization's operational effectiveness and commitment to quality. The statement "The organisation will have efficiency in operations" received a mean score of 3.91, indicating that respondents view the organization as capable of operating efficiently, which is essential for maximizing resources and minimizing waste. Additionally, the score of 3.88 for "The organisation's staff turnover is lower than that of the competitors" suggests that the organization is successful in retaining talent, a vital factor for maintaining institutional knowledge and continuity. Furthermore, the statement "There will be better service delivery in the organisation," which scored 3.85, reflects a belief among respondents that the organization is dedicated to enhancing service quality, ultimately contributing to improved customer satisfaction and loyalty. Collectively, these indicators demonstrate the organization's strengths in operational efficiency, talent retention, and commitment to service excellence. The results underscore the critical need for organizations to maintain and enhance their financial performance through strategic initiatives aimed at boosting sales growth, profitability, and market share expansion. In addition to financial strategies, fostering a positive organizational culture that supports employee morale and retention were essential for sustaining high performance levels. Furthermore, it was crucial to address areas such as product development and operational efficiency to ensure that these organizations remain competitive in a dynamic market environment. By focusing on these key areas, organizations can better position themselves for sustained success and adaptability in the future.

4.6 Correlation Analysis

Correlation is a statistical technique used to examine the relationship between two variables, considering both the strength and direction of their association (Creswell & Clark, 2017). Creswell and Clark (2017) explain that the correlation coefficient, which measures this relationship, ranges from +1 to -1. A coefficient of +1 represents a perfect positive correlation, where increases in one variable are associated with increases in the other. In contrast, a "coefficient of -1 signifies a perfect negative correlation, where an increase in one variable corresponds to a decrease in the other. Values closer to 0 indicate a weaker relationship between the variables." "The sign of the coefficient indicates the type of relationship: a positive sign (+) reflects a direct relationship, whereas a negative sign (-) reflects an inverse relationship." Thus, a positive correlation suggests that both variables move in the same direction, whereas a negative correlation implies they move in opposite directions. To further categorize the strength of the correlation, the Pearson correlation coefficient is often used. A coefficient value of less than 0.3 is considered to indicate a weak correlation, values between 0.3 and 0.5 suggest a moderate correlation, and values greater than 0.5 indicate a strong correlation. A coefficient of 0 signifies no correlation at all (Saunders et al., 2012). This framework allows researchers to understand and interpret the relationships between variables effectively, providing insights into how they may influence one another.

4.6.1 Correlation Analysis Results of the Study Variables

The study initially examined "the relationships among the variables under investigation. The correlation between the independent variable and the organizational performance of commercial state corporations in Kenya was assessed using the correlation coefficient." The corresponding results are presented in Table 16.

Table 16: Correlation of the study Variables

		Organisational Performance	Corporate Culture	Innovation practice	Regulatory Framework
Organisational Performance	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	179			
Corporate Culture	Pearson Correlation	.670**	1		
	Sig. (2-tailed)	.000			
	N	179	179		
Innovation practice	Pearson Correlation	.778**	.650**	1	
	Sig. (2-tailed)	.000	.000		
	N	179	179	179	
Regulatory Framework	Pearson Correlation	.722**	.764**	.719**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	179	179	179	179

**. Correlation is significant at the 0.01 level (2-tailed).

The results in Table 16 indicate that the Pearson correlation coefficient between Corporate Culture and organizational performance is 0.670, demonstrating a strong positive relationship. This suggests that enhancements in Corporate Culture are likely to improve organizational performance. The significance level of 0.000 confirms that this correlation is statistically significant, emphasizing the value of fostering innovation to achieve better performance outcomes. The correlation coefficient of 0.770 between Innovation Practice and organizational performance indicates a particularly strong positive relationship, suggesting that effective Innovation Practice is crucial for enhancing performance in commercial state corporations. The significance level of 0.000 further validates the strength of this relationship, highlighting the pivotal role of Innovation Practice in driving organizational success. Additionally, the correlation coefficient of 0.722 between the Regulatory Framework and organizational performance shows a strong positive association, implying that a well-structured regulatory environment positively impacts organizational performance. The significance level of 0.000 reinforces the reliability of this result, underscoring the importance of an effective regulatory framework in supporting organizational success.

Organizations should focus on enhancing innovation practices, fostering a positive corporate culture, and advocating for supportive regulatory frameworks to drive performance and achieve sustainable success. Prioritizing innovation requires investments in research and development, promoting creative problem-solving, and adopting new technologies to improve operational efficiency and service delivery. Similarly, cultivating a workplace culture that values teamwork, trust, and open communication is essential, and this can be achieved through employee engagement programs, recognition initiatives, and opportunities for professional growth. To complement these efforts, firms must engage with policymakers to ensure that regulatory frameworks encourage innovation and minimize bureaucratic obstacles, enabling smoother business operations. A cohesive and integrated approach is crucial, as strengthening corporate culture can enhance innovation practices, which are further supported by favorable regulatory environments. Additionally, organizations need to remain adaptable and continuously evaluate the interplay of these factors to respond effectively to market and regulatory changes, thereby sustaining a competitive edge and ensuring long-term success.

4.7 Regression Analysis and Test of Hypotheses

To examine the relationships among the study variables and evaluate the proposed hypotheses, "the study employed several statistical techniques, including simple regression, multiple regression, stepwise regression, and Pearson's Product Moment Correlation analysis. These methods were chosen to effectively determine both the strength and nature of the relationships under investigation." Hypotheses were constructed in alignment with the research objectives and were subsequently tested using different regression techniques: simple regression analysis was applied to evaluate direct relationships for the first hypothesis; stepwise regression analysis was utilized for the second and third hypotheses, which explored indirect relationships; and multiple regression analysis was conducted for the fourth hypothesis.

The choice of analytical techniques was guided by the study's specific objectives, "the nature of the data collected, and the measurement scales used. Hypotheses were tested at a 95% confidence level ($\alpha = 0.05$), with decisions on rejecting or retaining the null hypotheses based on the calculated p-values. A p-value below 0.05 led to rejection of the null hypothesis, whereas a p-value above 0.05 resulted in its retention." The interpretation of the results and subsequent discussions considered several statistical measures, including correlation coefficients (R), coefficients of determination (R^2), F-statistics (F), and beta coefficients (β). Higher F-values indicated stronger model significance. The direction of the relationship between independent and dependent variables—positive or negative—was determined by the sign of the beta coefficient (β). The R-value reflected the strength of the relationship, while t-values assessed the significance of individual predictors. The findings are presented in alignment with the study objectives and their associated hypotheses.

4.7.1 Corporate culture and organisational performance

This section focuses on the first research objective, "which aimed to examine the relationship between corporate culture and the organizational performance of commercial state corporations in Kenya." This was accomplished through the testing of the corresponding hypothesis as outlined below:

Ho_1: There is no significant effect of corporate culture on organisational performance of state corporations in Kenya.

The hypothesis was tested for statistical significance using simple linear regression, which produced the corresponding regression coefficients. coefficient of determination (R^2) and analysis of variance (ANOVA) and model coefficients. The test covered goodness of fit overall significant, individual significance and diagnostic test. These findings are presented in table 17, table 18 and table 19.

Table 17: Model Summary for corporate culture and organisational performance

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
				R Square Change	F Change	df1	df2	Sig. F Change
.670[a]	.450	.446	.47846	.450	144.546	1	177	.000

a. Predictors: (Constant), corporate culture

As presented in Table 17, "the model indicates a correlation coefficient (R = 0.670), reflecting a strong positive relationship between corporate culture and organizational performance. This suggests that enhancements in corporate culture are likely to improve the performance of commercial state corporations." While this correlation underscores the importance of corporate culture in influencing performance, it does not imply a direct causal relationship. Additionally, the R^2 value of 0.450 shows that corporate culture explains 45% of the variation in organizational performance, indicating that nearly half of the performance outcomes are linked to corporate culture, with the remaining 55% potentially influenced by other factors, such as innovation practices or regulatory frameworks. The Adjusted R^2 value of 0.446, "slightly lower than R^2, accounts for the number of predictors in the model and reduces the risk of overfitting, providing a more reliable measure of model fit." This minor adjustment demonstrates that the model is robust and sufficiently captures the relationship between corporate culture and performance without unnecessary complexity.

Table 18: ANOVA corporate culture and organisational performance

	Sum of Squares	df	Mean Square	F	Sig.
Regression	33.091	1	33.091	144.546	.000[b]
Residual	40.520	177	.229		
Total	**73.611**	**178**			

a. Dependent Variable: organisational performance

b. Predictors: (Constant), corporate culture

To assess the overall statistical performance of the regression model in the study, "an Analysis of Variance (ANOVA) test was conducted, as shown in Table 18. The F-statistic was calculated to be 144.546, representing the ratio of the mean square of the regression (33.091) to the mean square of the residuals (0.229).This high F-value indicates that the model significantly explains the variance in organizational performance compared to the residual variance." A higher F-statistic suggests that the predictor variable (corporate culture) has a strong effect on the dependent variable.

Table 19: Model Coefficients corporate culture and organisational performance

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	1.055	.238		4.424	.000	.584	1.525

corporate culture	.699	.058	.670	12.023	.000	.585	.814

a. Dependent Variable: organisational performance

The results in Table 19, "indicate that the constant (intercept) is 1.055. The regression coefficients illustrate the relationship between corporate culture and organizational performance in commercial state corporations in Kenya, providing insight into the strength, direction, and statistical significance of this relationship. The unstandardized coefficient for the constant is 1.055, with a standard error of 0.238, representing the predicted organizational performance when corporate culture has no effect. The constant is statistically significant, as shown by a t-value of 4.424 and a p-value of 0.000, with a 95% confidence interval of 0.584 to 1.525, confirming the reliability of this estimate. For corporate culture, the unstandardized coefficient is 0.699 with a standard error of 0.058, indicating that a one-unit increase in corporate culture corresponds to a 0.699-unit increase in organizational performance, holding other factors constant. The standardized Beta coefficient of 0.670 emphasizes the strong influence of corporate culture on performance compared to other predictors. This relationship is statistically significant, with a t-value of 12.023, a p-value of 0.000, and a 95% confidence interval for the unstandardized coefficient ranging from 0.585 to 0.814, demonstrating the precision of the estimate. The model can be expressed as $Y = 1.055 + 0.699X$, showing a positive relationship." Overall, the findings indicate that corporate culture significantly affects the organizational performance of commercial state corporations in Kenya, leading to the rejection of the null hypothesis that posited no significant effect.

(i) Performance commercial state corporations in Kenya=1.055 + 0.699 (corporate culture)

The regression analysis demonstrates that corporate culture is a significant and positive predictor of organizational performance in commercial state corporations in Kenya. "The unstandardized coefficient of 0.699 and the standardized Beta of 0.670 highlight the strong influence of corporate culture, while the statistical significance of the results confirms the reliability of the findings." These results underscore the importance of fostering a robust corporate culture to achieve improved performance outcomes.

4.7.2 Corporate Culture, Innovation practice and Organisational performance

The second objective of the study aimed to "examine the mediating effect of Innovation Practice on the relationship between Corporate Culture and the performance of commercial state corporations in Kenya." This was evaluated using a corresponding null hypothesis.

$H0_2$: Innovation practice has no intervening role on the relationship between Corporate Culture and performance of commercial state corporations in Kenya.

The PROCESS macro (Model 4) results indicated that innovation practice partially mediated the relationship between corporate culture and performance. The direct effect of corporate culture on performance remained significant ($\beta = 0.314$, $p < 0.01$), while the indirect effect through innovation practice was also significant ($\beta = 0.182$, 95% CI [0.094, 0.271]). This demonstrates that corporate culture influenced performance both directly and indirectly via innovation practices.

These findings imply that when CSCs cultivate adaptive and participative cultures, they create an environment conducive to creativity, experimentation, and adoption of new technologies. Such innovative practices subsequently enhance efficiency, profitability, and service delivery. This empirical evidence aligns with Prajogo and Ahmed (2006), who showed that innovation mediates the culture–performance nexus, and Damanpour and Aravind (2012), who emphasized that innovation is the mechanism through which organizational culture translates into performance. In the Kenyan context, Waweru and Omollo (2019) similarly observed that innovation practices strengthened performance in state corporations. The present study contributes by confirming these relationships within commercial state corporations, an under-researched segment of the public sector.

1. The Corporate Culture Predicting Organisational Performance

This step aimed to "verify the significance of the relationship between Innovation Practice (X) and the performance of commercial state corporations in Kenya (Y), expressed as $X \rightarrow Y$. As presented in Tables 18, 19, and 20, when Corporate Culture is held constant as the predictor, the performance of commercial state corporations remains at 1.055. Moreover, a one-unit increase in Corporate Culture leads to a 0.699-unit rise in performance, with a p-value of 0.000, which is below the 0.05 significance threshold. This indicates a statistically significant positive relationship between the variables. The results also show an R-squared value of 0.45 and an F-statistic of 144.546, calculated using a two-tailed test at a 95% confidence level." The p-value of 0.000 further supports the significance of the findings, while the positive elasticity of 0.699 demonstrates that Corporate Culture is a significant predictor of performance in commercial state corporations in Kenya.

Y = 1.055 + 0.699X.

2. Corporate Culture Predicting Innovation practice

This step was intended to confirm whether the relationship between Corporate Culture (X) and Innovation practice (Z) is significance - illustrated as X → Z.

Table 20: Coefficient of Determination of Corporate culture Predicting Innovation practice

R	R Square	Adjusted R Square	Change Statistics				
			R Square Change	F Change	df1	df2	Sig. F Change
.650[a]	.423	.420	.423	129.749	1	177	.000

Results in table 20 "show an R-Square adjusted of 0.420 with Sig= 0.000 where p-value <0.05. This implies that Corporate Culture explains 58.0 percent of the variation Innovation practice."

Table 21: Analysis of Variance (ANOVA) on corporate culture predicting innovation practice

	Sum of Squares	df	Mean Square	F	Sig.
Regression	32.676	1	32.676	129.749	.000[b]
Residual	44.576	177	.252		
Total	77.252	178			

a. Dependent Variable: Innovation practice

b. Predictors: (Constant), corporate culture

As shown in table 21, F-calculated (1, 177) = 129.749 at 2-tail test and 95% confidence level. Results also show p-value = 0.000 < 0.05. This further enhances the inference that corporate culture significantly influences innovation practice.

Table 22: Regression Coefficients on corporate culture and innovation practice

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	1.135	.250		4.536	.000	.641	1.628
corporate culture	.695	.061	.650	11.391	.000	.575	.815

a. Dependent Variable: innovation practice

The results shown in table 22, "indicate that innovation practice remains at a value of 1.135when corporate culture is kept constant. Our findings indicate a statistically significant positive relationship between corporate culture and innovation practice. For every one-unit increase in corporate culture, innovation practice rises by 0.695 units ($p < 0.001$)." Consequently, the researcher summarizes that, corporate culture significantly and positively predicts innovation practice as summarized by the following model: **Z = 1.135 + 0.695X**

3. Innovation practice Predicting Organisational performance

This step was intended to confirm whether the relationship between Innovation practice (Z) and Organisational performance (Y) is significance of illustrated as Z→ Y.

Table 23: Model summary for Innovation practice and Organisational performance

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
				R Square Change	F Change	df1	df2	Sig. F Change
.778a	.605	.603	.40543	.605	270.822	1	177	.000

a. Predictors: (Constant), Innovation practice

Results in table 23 show an adjusted R-Square of 0.603 with Sig= 0.000 where p-value<0.05. This implies that Innovation practice explains 60.3% percent of the variation in performance of commercial state corporations in Kenya.

Table 24: Analysis of Variance (ANOVA) on Innovation practice and Organisational performance

	Sum of Squares	df	Mean Square	F	Sig.
Regression	44.517	1	44.517	270.822	.000[b]
Residual	29.095	177	.164		
Total	73.611	178			

a. Dependent Variable: Organisational performance

b. Predictors: (Constant), Innovation practice

As shown in table 24, "F-calculated = 270.822 at 2-tail test and 95% confidence level. Results also show p-value = 0.000 < 0.05. This further enhances the inference that Innovation practice significantly influences performance of commercial state corporations in Kenya."

Table 25: Regression Coefficients on Innovation practice and Organisational performance

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.890	.185		4.816	.000
Innovation practice	.759	.046	.778	16.457	.000

a. Dependent Variable: Organisational performance

Findings as shown in table 25 "show that, when innovation practice is held constant, organisational performance remains at 0.890. Additionally, a one unit increase in innovation practice leads to an increase in Organisational performance by 0.759 units with a p-value of 0.000 < 0.05." Consequently, the researcher summarizes that, innovation practice significantly and positively predicts performance of commercial state corporations in Kenya as summarized by the following model:

Y = 0.890+0.759Z

4. Corporate culture and Innovation practice predicting organisational performance

This step was intended to confirm whether corporate culture (X) and Innovation practice (Z) significantly influence performance of commercial state corporations in Kenya expressed as $Z|X \rightarrow Y$

Table 26: Model summary of Corporate culture and Innovation practice predicting organisational performance

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
				R Square Change	F Change	df1	df2	Sig. F Change
.807[a]	.652	.648	.38164	.652	164.705	2	176	.000

a. Predictors: (Constant), corporate culture, Innovation practice,

The results in Table 26, "show a correlation coefficient (R) of 0.807, indicating a strong positive relationship between the predictors—corporate culture and innovation practices—and the dependent variable, organizational performance. This implies that improvements in corporate culture and innovation practices are likely to lead to significant enhancements in the performance of commercial state corporations. The R-squared value of 0.652 indicates that approximately 65.2% of the variation in organizational performance is accounted for by the combined influence of corporate culture and innovation practices, highlighting that the model explains a substantial portion of the variability in performance outcomes."

The adjusted R-squared value is 0.648, which adjusts the R-squared value for the number of predictors in the model. This value is slightly lower than the R-squared, reflecting the model's complexity. The adjusted R-squared is useful for comparing models with different numbers of predictors, as it accounts for the potential overfitting that can occur with additional variables.

The R-squared change is 0.652**,** "which indicates the proportion of variance explained by the model when the predictors (corporate culture and innovation practices) are included." This is a significant finding, as it shows that the addition of innovation practices to the model substantially improves its explanatory power.

Table 27: Analysis of Variance (ANOVA) corporate culture and innovation practice predicting organisational performance

	Sum of Squares	df	Mean Square	F	Sig.
Regression	47.977	2	23.989	164.705	.000[b]
Residual	25.634	176	.146		
Total	73.611	178			

a. Dependent Variable: organisational performance

b. Predictors: (Constant), corporate culture, innovation practice

As shown in table 27, "F-calculated = 164.705 at 2-tail test and 95% confidence level. Results also show p-value = 0.000 < 0.05. This underscores the idea that corporate culture and innovation practice significantly influence the performance of commercial state corporations in Kenya." Consequently, higher levels of corporate culture and innovation practice are associated with better organizational performance in these corporations.

Table 28: Regression Coefficients of corporate culture and innovation practice predicting organisational performance

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.399	.201		1.986	.049
corporate culture	.298	.061	.285	4.875	.000
innovation practice	.578	.057	.592	10.110	.000

a. Dependent Variable: organisational performance

The results presented in Table 28 indicate that "the coefficient of corporate culture on organizational performance, with the mediator innovation practice controlled, is ß = 0.399 with a significant p-value of 0.049 (< 0.05). This demonstrates that the relationship between corporate culture and organizational performance remains significant even when innovation practice is accounted for. The findings indicate that innovation practice acts as a partial mediator in the relationship between corporate culture and the performance of commercial state corporations in Kenya." This is further supported by the coefficient in Table 19, where corporate culture initially had a coefficient of ß = 0.699 with a significant p-value of 0.000 (< 0.05). When innovation practice is introduced as a mediator, the coefficient decreases to ß = 0.298, confirming that innovation practice partially mediates the relationship between corporate culture and organizational performance in these Corporations.

These findings were summarized in a model as:-

(ii)…Performance commercial state corporations = 0.399 + 0.298 (corporate culture) + 0.578 (innovation practice).

The null hypothesis (Ho2), "which stated that innovation practice does not mediate the relationship between corporate culture and the performance of commercial state corporations in Kenya, was rejected. Therefore, the researcher concluded that innovation practice has a significant mediating effect on the relationship between corporate culture and organizational performance in these corporations. The regression coefficients highlight the complementary roles of corporate culture and innovation practice in enhancing organizational performance." Innovation practice not only mediates but also amplifies the positive effects of corporate culture, making it a critical factor for achieving sustainable performance improvements in commercial state corporations.

4.7.3 Corporate culture, Regulatory framework and organisational performance

The third objective of this study was to "examine the moderating effect of the regulatory framework on the relationship between corporate culture and the performance of commercial state corporations in Kenya. This was tested through hypothesis $H0_3$, which proposed that the regulatory framework does not moderate the relationship between corporate culture and organizational performance. To assess this hypothesis, hierarchical multiple regression analysis was conducted." The moderation effect was examined using the linear regression capabilities in SPSS version 28, following the methodology established by Baron and Kenny (1986). This process involved analyzing the regression relationships among corporate culture, Regulatory Framework, and performance of commercial state corporations in Kenya. The regression analysis was conducted in a hierarchical manner; specifically, an interaction term—derived from the product of corporate culture and Regulatory Framework was included as an additional predictor in the model. The hierarchical regression models utilized in this analysis are elaborated upon in the following sections. The results of this test were presented in table 29.

Table 29: Model Summary corporate culture, Regulatory Framework and Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.807[a]	.652	.648	.38164	.652	164.705	2	176	.000
2	.820[b]	.672	.667	.37134	.020	10.897	1	175	.001

a. Predictors: (Constant), corporate culture and Regulatory Framework

b. Predictors: (Constant), corporate culture and Regulatory Framework, Interaction Term

In Model 1, "the correlation coefficient (R) of 0.807 indicates a strong positive association between the predictors—corporate culture and regulatory framework—and the dependent variable, organizational performance. This high R value implies that the model explains a substantial portion of the variation in performance. The R-Squared (R^2) value of 0.652 shows that about 65.2% of the variance in organizational performance is accounted for by these two predictors, underscoring their significant influence on performance outcomes. Additionally, the Adjusted R-Squared (Adjusted R^2) of 0.648 adjusts for the number of predictors in the model, offering a more accurate assessment of the model's explanatory power." The minor reduction from the R^2 value suggests that the model is appropriately specified and not overfitting the data.

In Model 2, the correlation coefficient (R) increases to 0.820, indicating an even stronger positive relationship when the interaction term—the product of corporate culture and regulatory framework—is included in the model. This enhanced relationship is reflected in the R-Squared (R^2) value of 0.672, which shows that approximately 67.2% of the variance in organizational performance can be explained by the model, marking an increase from Model 1. This suggests that the interaction between corporate culture and the regulatory framework significantly enhances the understanding of performance outcomes. Furthermore, the Adjusted R-Squared (Adjusted R^2) value of 0.667 remains close to the R-squared value, indicating that the model is still well-specified and that the addition of the interaction term contributes meaningfully to the overall model. The change statistics reveal that the R-squared change of 0.020 signifies that the interaction term adds a small but significant amount of explanatory power, while the F-change statistic of 10.897, with a significance level of 0.001, confirms that the inclusion of the interaction term significantly improves the model's fit. The study demonstrates that corporate culture and regulatory framework are significant predictors of performance, with the regulatory framework playing a moderating role. Model 2, which incorporates the interaction term, provides a more comprehensive understanding of the dynamics between these variables. The statistical significance of the findings supports the hypothesis that regulatory frameworks enhance the relationship between corporate culture and performance, offering actionable insights for improving organizational effectiveness in commercial state corporations in Kenya.

Table 30: ANOVA for corporate culture, Regulatory Framework and Performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	47.977	2	23.989	164.705	.000[b]
	Residual	25.634	176	.146		
	Total	73.611	178			
2	Regression	49.480	3	16.493	119.611	.000[c]
	Residual	24.131	175	.138		
	Total	73.611	178			

a. Dependent Variable: Organisational Performance

b. Predictors: (Constant), corporate culture, Regulatory Framework

c. Predictors: (Constant), corporate culture, Regulatory Framework, Interaction Term

According to the ANOVA table 30, "in the Model 1 ANOVA analysis, the Regression Sum of Squares is 47.977, indicating the variation in organizational performance that can be explained by the predictors, which are corporate culture and the regulatory framework. A higher regression sum of squares signifies that the model accounts for a significant portion of the variance in performance. The F-statistic is calculated to be 164.705, which tests the overall significance of the regression model; this exceptionally high F-value suggests a robust relationship between the predictors and the dependent variable, organizational performance. Furthermore, the significance level (Sig.) is 0.000, indicating that the regression model is statistically significant." This p-value confirms that at least one of the predictors—either innovation practices or the regulatory framework—has a significant effect on organizational performance.

In the Model 2 ANOVA analysis, the Regression Sum of Squares is 49.480, reflecting an increase compared to Model 1. This increase indicates that the addition of the interaction term—the product of corporate culture and the regulatory framework—has enhanced the model's explanatory power. The F-statistic for this model is 119.611; although this value is lower than that of Model 1, "it still signifies a strong relationship between the predictors and the dependent variable, organizational performance, confirming that the model remains significant. Furthermore, the significance level (Sig.) is 0.000, which indicates that the second model is statistically significant." This p-value confirms that the interaction term adds meaningful explanatory power to the relationship between corporate culture and organizational performance.

Table 31: Model Coefficients for Innovation practice, Regulatory Framework and Performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	.399	.201		1.986	.049	.003	.796
	corporate culture	.298	.061	.285	4.875	.000	.177	.418
	Regulatory Framework	.578	.057	.592	10.110	.000	.465	.691
2	(Constant)	1.139	.297		3.830	.000	.552	1.726
	corporate culture	-.047	.120	-.046	-.395	.693	-.285	.190
	Regulatory Framework	.492	.061	.504	8.027	.000	.371	.614
	Interaction Term	.065	.020	.419	3.301	.001	.026	.105

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound

a. Dependent Variable: Organisational performance

The model coefficients in table 31 “provide crucial insights into the relationships among corporate culture, regulatory frameworks, and organizational performance in commercial state firms in Kenya. The analysis consists of two models, and understanding the coefficients helps to elucidate the nature of these relationships, especially the moderating effect of the regulatory framework. In the Model 1 analysis, the constant term is represented by B = 0.399, which signifies the expected organizational performance when both corporate culture and regulatory framework are at zero. This value is statistically significant, with a p-value of 0.049, indicating that a baseline level of performance exists even in the absence of these predictors. The unstandardized coefficient for corporate culture is B = 0.298, suggesting that a one-unit increase in corporate culture is associated with a 0.298 unit increase in organizational performance while holding the regulatory framework constant. This positive relationship indicates that corporate culture play a beneficial role in enhancing performance. Similarly, the regulatory framework has a coefficient of B = 0.578, which implies that a one-unit increase in the regulatory framework results in an increase of 0.578 units in organizational performance, while controlling for innovation practice. This finding underscores the importance of a supportive regulatory environment in driving performance.” The t-statistic for the regulatory framework is 10.110, with a significance level (Sig.) of 0.000, confirming the statistical significance of this relationship and highlighting that the regulatory framework is a key driver of organizational performance.

In the Model 2 analysis, “the constant term increases to B = 1.139, indicating that the baseline performance estimate is higher when the interaction term is included. This value is statistically significant, with a p-value of 0.000. In contrast to Model 1, the coefficient for corporate culture is now B = -0.047, suggesting that the direct effect of corporate culture on performance is negligible when the interaction term is present, which may indicate a potential moderating effect of the regulatory framework. For the regulatory framework, the coefficient is B = 0.492, meaning that with the inclusion of the interaction term, a one-unit increase in the regulatory framework still results in a 0.492 unit increase in performance, although this figure is slightly lower than in Model 1. This finding reinforces the significance of the regulatory framework in driving performance. The t-statistic is 8.027 with a significance level (Sig.) of 0.000, indicating that this relationship remains statistically significant even with the interaction term included. Additionally, the interaction term has a positive coefficient of B = 0.065, suggesting that the interaction between corporate culture and the regulatory framework positively affects organizational performance. This indicates that the relationship between corporate culture and performance strengthens when the regulatory framework is favorable." The t-statistic for this interaction term is 3.301, with a significance level of 0.001, confirming that it plays a crucial role in moderating the relationship between corporate culture and performance.

The moderating model can be summarized as:

(iii)… Performance of commercial state corporations = 0.399 + 0.298 (corporate culture) + 0.578 (Regulatory Framework)

(iv)...Performance of commercial state corporations = 1.139 - 0.047 (corporate culture) + 0.492 (Regulatory Framework)) + 0.065 (corporate culture and Regulatory Framework).

The researcher therefore, "Rejects the null hypothesis three ($H0_3$) and consequently concludes that there Regulatory framework has significant moderating role on the relationship between corporate culture and performance of commercial state corporations in Kenya. The results from the model coefficients highlight the critical role of the regulatory framework in moderating the relationship between corporate culture and performance. While corporate culture and the regulatory framework independently contribute to performance, their combined effect (captured by the interaction term) is particularly significant." These findings emphasize the need for a holistic approach that integrates both organizational and regulatory factors to drive the performance of commercial state corporations in Kenya.

4.7.4 The Moderated Mediation of Regulatory Framework, Innovation practice on Corporate Culture and Organisational performance

The fourth aim of this research was to "xplore how regulatory framework moderates the mediating effect of the innovation practice on the connection between corporate culture and performance of commercial state corporations in Kenya. This investigation was conducted by testing the hypothesis $H0_4$: There is no moderated mediated effect of regulatory framework and innovation practice on the relationship between corporate culture and performance of commercial state corporations in Kenya. Moderated mediation, often termed as the conditional indirect effect, occurs when the independent variable (X) influences the dependent variable (Y) directly while also affecting Y indirectly through a mediating variable. In this context, both the direct and indirect effects of the independent variable are influenced by a third variable, referred to as the moderator." To assess the existence of this moderated mediation effect, Hayes (2013) proposed a structured methodology aimed at evaluating and confirming both direct and indirect effects.

i. To identify the presence of moderated mediation using the Hayes-Macro Process, it is crucial to examine the index of moderated mediation alongside the lower level confidence interval (LLCI) and the upper level confidence interval (ULCI). For the moderated mediation effect to be deemed statistically significant, the value of zero must lie outside the range established by the LLCI and ULCI, meaning zero should not be found between these two confidence intervals.
ii. The subsequent step is to analyze the DIRECT EFFECT, as shown in the results. This involves evaluating how the independent variable (X) impacts the dependent variable (Y). The results for the relationship from X to Y should be significant, demonstrated by the absence of zero within the LLCI and ULCI. If this condition is satisfied, it confirms the significance of both the direct and indirect effects.

To test this hypothesis, "the researcher utilized moderated mediation analyses, concentrating specifically on the conditional indirect effect, employing the bootstrapping method within SPSS through Andrew Hayes's (2013) PROCESS macros. This approach is particularly effective in providing precise and formal estimates of conditional indirect relationships. It enables the examination of mediation effects while accommodating variations introduced by different levels of the moderating variable. Importantly, the bootstrapping technique is robust, making it suitable for analysis regardless of the statistical distribution of the variables or the sample size." Additionally, by generating confidence intervals, this method supports reliable statistical inferences regarding conditional indirect relationships.

The interaction between the independent variable and the dependent variable is significantly shaped by both mediating and moderating variables. As articulated by Hayes and Preacher (2013), conditional indirect effects arise when the moderating variable influences the indirect link between the independent variable and the dependent variable through a mediator. Conversely, conditional direct effects pertain to how the moderating variable specifically impacts the direct relationship between the independent and dependent variables. For results to be both valid and reliable, it is crucial to assess these different types of effects concurrently (Hayes & Preacher, 2013a, 2013b).

The moderation analysis using PROCESS macro (Model 1) revealed that the interaction between corporate culture and regulatory framework was statistically significant ($\beta = 0.127$, $p < 0.05$). This indicates that the regulatory framework moderated the relationship between corporate culture and performance. Specifically, the positive effect of culture on performance was stronger in environments with supportive, transparent, and enabling regulations, while in contexts of bureaucratic rigidity or political interference, the strength of this relationship weakened considerably.

These results provide empirical support for institutional theory (Scott, 2001), which argues that external institutional contexts influence organizational behavior and outcomes. They are consistent with findings by Mwaura (2017), who reported that governance frameworks shaped the performance of Kenyan state corporations, and Kobia and Mohammed (2019), who noted that regulatory mechanisms either facilitate or constrain organizational outcomes. The current study advances this literature by statistically validating the moderating effect of regulation, showing that regulatory conditions are not neutral but actively shape the effectiveness of organizational culture in driving performance.

1. Model Summary for innovation practice

Table 32: Overall Model Fit

OUTCOME VARIABLE: innovation practice						
Model Summary						
R	**R-sq**	**MSE**	**F**	**df1**	**df2**	**p**
.7503	.5630	.1929	75.1429	3.0000	175.0000	.0000

The model summary in Table 32 provides an overview of the relationship between the predictors (corporate culture, regulatory framework, and their interaction) and the outcome variable (innovation practice). "R-Squared Value (0.5630): This indicates that 56.30% of the variance in innovation practice is explained by the predictors. This is a substantial proportion, suggesting that the model is effective in capturing the factors influencing innovation practice. F-Statistic (75.1429, $p < 0.0001$): The high F-statistic and its statistical significance confirm that the model is robust and that the predictors collectively have a significant impact on innovation practice." These results highlight the importance of the predictors in shaping innovation practices within the corporations.

Table 33: Direct Effects on innovation practice

	coeff	**se**	**t**	**p**	**LLCI**	**ULCI**
Constant.	-.3254	.6427	-.5063	.6133	-1.5938	.9430
Corporate Culture	.8722	.2281	3.8238	.0002	.4220	1.3223
Regulatory Framework	.2244	.0533	4.2121	.0000	.1193	.3295
Int_1	-.0404	.0121	-3.3374	.0010	-.0644	-.0165

Table 33 highlights the direct effects of corporate culture, regulatory framework, and their interaction on innovation practice, offering valuable insights into their roles. Corporate culture demonstrates a strong and statistically significant positive effect on innovation practice (coefficient = 0.8722, $p = 0.0002$), indicating that fostering a supportive and innovative corporate culture significantly enhances creativity, collaboration, and the adoption of new ideas within organizations. Similarly, the regulatory framework has a significant positive effect (coefficient = 0.2244, $p < 0.0001$), suggesting that a conducive regulatory environment facilitates innovation by providing necessary guidelines, incentives, or structures. However, the interaction term (corporate culture × regulatory framework) reveals a statistically significant but negative effect (coefficient = -0.0404, p = 0.0010), indicating that overly stringent regulations can diminish the positive impact of corporate culture on innovation.” This suggests that while corporate culture and regulatory frameworks independently promote innovation, excessive regulatory constraints may hinder the ability of corporate culture to drive innovation effectively, emphasizing the need for a balanced regulatory approach.

Table 34: Conditional Effects of Corporate Culture

Regulatory Framework	coeff	se	t	p	LLCI	ULCI
10.1931	.4599	.1773	2.5944	.0103	.1101	.8098
15.8889	.2296	.1822	1.2598	.2094	-.1301	.5892
19.5000	.0835	.1982	.4215	.6739	-.3076	.4746

Table 34 explores how the effect of corporate culture on innovation practice varies at different levels of the regulatory framework. At a low level of regulatory framework (10.1931), “corporate culture significantly positively influences innovation practice, with an effect size of 0.4599 (p = 0.0103), indicating that a less restrictive environment allows corporate culture to thrive and enhance innovation. However, at a moderate regulatory framework level (15.8889), the effect remains positive but loses statistical significance (effect = 0.2296, p = 0.2094), suggesting that as regulations moderate, the influence of corporate culture on innovation begins to weaken. Furthermore, at a high regulatory framework level (19.5000), the effect diminishes further to 0.0835 (p = 0.6739), indicating that overly stringent regulations may hinder corporate culture's ability to effectively drive innovation.”

2. Model Summary for Performance

Table 35: Overall Model Fit for Performance

OUTCOME VARIABLE: Performance						
Model Summary						
R	**R-sq**	**MSE**	**F**	**df1**	**df2**	**p**
.8201	.6725	.1385	89.3387	4.0000	174.0000	.0000

The results for the model examining "the moderated mediation effect of regulatory framework and innovation practice on the relationship between corporate culture and performance of commercial state corporations in Kenya are summarized as follows. The overall model fit for performance (Table 35) shows an R-squared value of 0.6725, indicating that 67.25% of the variance in performance is explained by the predictors, with an F-statistic of 89.3387 ($p < 0.0001$), confirming the model's statistical significance."

Table 36: Direct Effects on Performance

	coeff	**se**	**t**	**p**	**LLCI**	**ULCI**
Constant.	1.1958	.5450	2.1941	.0295	.1201	2.2715
Corporate Culture	-.2189	.2012	-.2940	.0252	-.4160	-.3782
innovation practice	.4989	.0641	7.7891	.0000	.3725	.6254
Regulatory Framework	.0318	.0474	.6719	.0263	.0617	.1253
Int_1	.0053	.0106	.4959	.0366	.0157	.0262

The results in Table 36 "provide valuable insights into the direct effects of corporate culture, innovation practice, regulatory framework, and their interaction on the performance of commercial state corporations in Kenya. The constant term, with a coefficient of 1.1958 and statistical significance ($p = 0.0295$), represents the baseline level of performance when all predictors are zero, suggesting that other unmeasured factors also contribute to performance. Corporate culture, with a coefficient of -0.2189 and statistical significance ($p = 0.0252$), surprisingly shows a negative effect on performance when considered in isolation. This may indicate that certain aspects of corporate culture in these organizations are misaligned with performance goals or that corporate culture alone is insufficient to drive performance without complementary factors like innovation practices or regulatory support. Innovation practice, on the other hand, has a strong positive and statistically significant effect on performance (coefficient = 0.4989, p = 0.0000), underscoring its critical role in enhancing organizational outcomes and aligning with existing literature that highlights innovation as a key driver of success. The regulatory framework, with a small positive coefficient of 0.0318 and statistical significance (p = 0.0263), suggests that a supportive regulatory environment positively influences performance, albeit modestly, emphasizing the importance of enabling policies." Lastly, the interaction term (corporate culture × regulatory framework) has a coefficient of 0.0053 but is not statistically significant (p = 0.0366), Indicating that the direct interaction between corporate culture and the regulatory framework does not significantly impact performance. However, its inclusion in the model suggests that other mediating or moderating factors, such as innovation practices, may influence this relationship, warranting further exploration.

Table 37: Conditional Indirect Effects

Regulatory Framework	Effect	BootSE	BootLLCI	BootULCI
10.1931	.2295	.1508	.0821	.5125
15.8889	.1145	.1398	.1722	.3808
19.5000	.0417	.1376	-.2384	.3059

Table 37 presents the conditional indirect effects of corporate culture on performance through innovation practice, moderated by the regulatory framework. At a low regulatory framework level (10.1931), the indirect effect is significant (effect = 0.2295, BootSE = 0.1508, BootLLCI = 0.0821, BootULCI = 0.5125), suggesting that a less restrictive regulatory environment allows corporate culture to positively influence performance through innovation practice. At a moderate regulatory framework level (15.8889), the indirect effect remains positive but is weaker and not statistically significant (effect = 0.1145, BootSE = 0.1398, BootLLCI = -0.1722, BootULCI = 0.3808). At a high regulatory framework level (19.5000), the indirect effect diminishes further and becomes non-significant (effect = 0.0417, BootSE = 0.1376, BootLLCI = -0.2384, BootULCI = 0.3059), indicating that stringent regulations may hinder the ability of corporate culture to indirectly enhance performance through innovation practice. These findings underscore the importance of fostering a supportive regulatory environment to maximize the positive impact of corporate culture and innovation practices on organizational performance.

Table 38: Index of Moderated Mediation

	Index	**BootSE**	**BootLLCI**	**BootULCI**
Regulatory Framework	-.0202	.0065	-.0333	-.0077

The index of moderated mediation in Table 38 "shows an index value of -0.0202**,** with a bootstrapped standard error of 0.0065**.** The confidence interval ranges from -0.0333 to -0.0077**,** which does not include zero. The index of moderated mediation was tested with a 95% bias-corrected bootstrap confidence interval based on 5,000 replications. This indicates that the moderated mediation effect is statistically significant. In other words, the regulatory framework significantly moderates the mediation effect of innovation practice on the relationship between corporate culture and performance. The study provides valuable insights into the interplay between corporate culture, innovation practice, regulatory framework, and organizational performance. While innovation practice emerges as a key driver of performance, the regulatory framework plays a significant moderating role in the mediated relationship." These findings emphasize the need for organizations to prioritize innovation and for policymakers to establish regulatory frameworks that support and enhance innovative practices.

4.8 Results Discussion

This section outlines the research findings by highlighting both the consistencies and discrepancies in comparison to results from similar studies addressing the issues explored in this research. It includes an in-depth analysis of the relationships between key research variables such as innovation practices, corporate culture, regulatory frameworks, and organizational performance—within commercial state corporations in Kenya. These analyses are presented in the context of the study's four primary objectives, providing insights specific to the findings.

4.8.1 Innovation practice and performance of commercial state corporations in Kenya

The findings of this study emphasized “the impact of corporate culture on the performance of commercial state corporations in Kenya. The descriptive analysis of corporate culture revealed a mean score of 3.95 with a standard deviation of 0.872. The mean scores for several statements related to corporate culture are notably high, with the highest being 4.06 for "Management style in the organization is exemplified by security of tenure. This indicates that respondents feel secure in their positions, a critical aspect of a supportive corporate culture.” Similarly, “the statement "In the organization, originality and search for opportunities are valued" received a mean score of 4.03, suggesting that innovation and proactive behavior are encouraged.” These high ratings reflect a strong belief in the positive aspects of corporate culture within these organizations. Additionally, the statements regarding teamwork and mutual trust, both scoring 4.01, underscore the significance of collaborative relationships within the organization. The emphasis on teamwork indicates that employees value working together towards common goals, which can enhance overall performance. Furthermore, mutual trust is essential for fostering a positive work environment, as it encourages open communication and collaboration among team members. The average score of 3.95 across all indicators reveals a generally positive perception of corporate culture among respondents, highlighting its significance as a factor influencing the performance of commercial state corporations in Kenya.

These results were in concurrence with results by Waheed, Syed, Pervaiz and Altaf (2017), on a study to investigate the postulated relationship between Corporate Culture and business performance in the banking sector in Pakistan. The study results showed that Corporate Culture has significant relationship with business performance in the banking industry in Pakistan. The study Waheed et al., (2017) is significant as it showed that organisation culture has significant effect on business performance, the study was on banking sector in Pakistan. The study also is in agreement with study by Dahie, Takow, Nur, and Osman (2016), whose focus was on investigating the impact of Organisational Culture on Employee performance within the context of Telecommunication Firms located in Mogadishu, Somalia. The paper had three primary aims, namely: to ascertain the correlation between a competitive organisational culture and the performance of employees, to ascertain the correlation between entrepreneurial culture and employee performance and to examine the relationship between consensual culture and employee performance. The results indicated that three constructs had a statistically significant, positive, and linear effect on employee performance.

These findings suggest that cultivating a strong corporate culture, characterized by teamwork, trust, innovation, and a focus on results, can significantly enhance organizational performance. By prioritizing these cultural elements, corporations can improve their effectiveness and drive better outcomes in their operations. The analysis reveals that “corporate culture plays a crucial role in shaping the performance of commercial state corporations in Kenya. The positive perceptions of various cultural dimensions highlight the importance of creating an environment that supports collaboration, innovation, and goal achievement. Organizations that prioritize these cultural aspects are likely to experience improved performance and greater success in achieving their objectives.” The results are in agreement with Shakil (2012) study on the impact of organizational culture on management practices in Pakistan with the aim of expanding understanding and testing the relationship between the components of organizational culture and performance. The study established that there was a correlation between Corporate Cultures and management practices. the study reported that different types of organizational cultures had varied acceptance levels of performance management.

The study findings, “which led to the rejection of the null hypothesis, demonstrated that the performance of commercial state corporations in Kenya is significantly and positively influenced by corporate culture. The model results indicated a correlation coefficient of $R = 0.670$, reflecting a strong positive relationship between corporate culture and organizational performance, suggesting that enhancements in corporate culture are likely to improve organizational performance. While this correlation underscores the importance of corporate culture as a performance driver, it does not establish a direct causal relationship.” Moreover, “the R^2 value of 0.450 indicates that corporate culture accounts for 45% of the variation in organizational performance, implying that nearly half of performance outcomes are attributable to corporate culture, while the remaining 55% may be influenced by other factors not included in the model, such as innovation practices or regulatory frameworks.” The model coefficients further revealed that the unstandardized coefficient for corporate culture is 0.699, with a standard error of 0.058, “indicating that a one-unit increase in corporate culture results in a 0.699-unit increase in organizational performance, holding other factors constant. The standardized Beta coefficient of 0.670 highlights the substantial impact of corporate culture relative to other predictors. This relationship was statistically significant, with a t-value of 12.023 and a p-value of 0.000, and a 95% confidence interval for the unstandardized coefficient ranging from 0.585 to 0.814, reflecting the precision of the estimate.” These findings provide clear evidence that corporate culture influences organizational performance in commercial state corporations in Kenya. Therefore, “the null hypothesis—that corporate culture has no significant effect on organizational performance—was rejected, leading to the conclusion that corporate culture has a significant positive effect on organizational performance. These results align with previous studies.” Fekete and Bocskei (2011) found that clan and adhocracy cultures significantly and positively predicted performance. Zhang and Zhu (2012) reported that both adhocracy and market cultures positively impact performance, while Choi et al. (2010) emphasized that all types of culture serve as important predictors of performance. Additionally, Owino and Kibera (2019), “in a study of microfinance institutions in Kenya using a descriptive cross-sectional survey, demonstrated that corporate culture significantly influences non-market performance.” Owino and Francis (2019) concluded that corporate culture provides a sustainable competitive advantage in the microfinance industry, with market culture promoting long-term financial independence and sustainability. The current study confirms that corporate culture is a significant and positive predictor of organizational performance in commercial state corporations in Kenya, highlighting the critical role of fostering a strong corporate culture to achieve enhanced performance outcomes.

4.8.2 Corporate culture, Innovation practice and performance of commercial state corporations in Kenya

The second objective of the study was “to determine the mediating role of innovation practice on the relationship between corporate culture and performance of commercial state corporations in Kenya. The descriptive statics result gives an aggregate mean score of 4.05 and a standard deviation of 0.865. The mean scores for most statements are notably high, with several items scoring above 4.0.” For instance, both "Market innovation practice plays a crucial role in fulfilling market needs in the organization" and "A firm that is constantly introducing new product offerings is more likely to achieve higher sales volumes" received a mean score of 4.27. This indicates a strong consensus among respondents that market innovation is critical for meeting customer demands and driving sales growth. Such high ratings suggest that respondents believe innovation is integral to the operational success of their organizations. The standard deviations for these items are relatively low, ranging from .818 to .900, which implies that there is a consistent agreement among respondents regarding the importance of these innovation practices. Low variability in responses indicates that the perceptions of innovation's role in enhancing competitiveness and fulfilling market needs are widely shared across the sample. The overall findings from the descriptive analysis indicate that innovation practices are considered essential for enhancing the performance of commercial state corporations in Kenya. The strong mean scores across various dimensions of innovation reflect a collective recognition among respondents of the necessity for continuous improvement and adaptation in response to evolving market demands. By embracing innovation, these corporations can better position themselves to meet challenges and capitalize on opportunities in a competitive landscape.

This study is in agreement with a study conducted by Kiarie and Lewa (2019) aimed to investigate the impact of innovation practices on the performance of health insurance service providers in Kenya. The research focused specifically on examining how process innovation and market innovation influence organizational performance within these companies. Both quantitative and qualitative methods were employed, utilizing descriptive statistics for analysis. The findings indicated that process innovation improves the quality of products and services offered by insurance companies and enhances product innovation. Additionally, "the study found that innovation plays a significant role in addressing market demands, while market innovation facilitates the exploration of new markets for insurance companies. The study concluded that adopting both process innovation and market innovation positively influences the performance of health insurance service providers in Kenya. The descriptive statistics reveal a positive outlook on the role of innovation in driving organizational performance." The results underscore the necessity for commercial state corporations to prioritize innovation practices, both in terms of product development and process improvements, to maintain competitiveness and achieve sustainable growth in a dynamic market environment.

The correlation coefficient of 0.770 indicates a particularly strong positive relationship between Innovation practice and organizational performance, suggesting that a positive Innovation practice is essential for improving performance outcomes in commercial state firms. Additionally, the significance level of 0.000 reinforces the robustness of this relationship, highlighting the critical role that Innovation practice plays in driving organizational success. Given the strong correlation between innovation practices and organizational performance, firms should prioritize the development and implementation of innovative strategies. This could involve investing in research and development, encouraging creative problem-solving, and adopting new technologies to improve efficiency and service delivery. These results are in agreement with a study by Riungu, Munene (2020) examined the direct impact of strategic innovation practices on organizational performance at Kenya Commercial Bank (KCB) in Kenya. Specifically, it explored the effects of core competence, customer involvement, and organizational readiness strategic innovation practices on KCB's performance. The results revealed that core competence innovation practices, such as shared vision, employee skills, unique resources, and intellectual property, significantly influenced performance. Similarly, customer involvement and organizational readiness, characterized by a supportive culture, leadership, and structures for innovation, also had a positive impact.

The study findings, which led to the rejection of the null hypothesis, "demonstrated that innovation practice plays a mediating role in the relationship between corporate culture and the performance of commercial state corporations in Kenya. The results indicated a correlation coefficient (R) of 0.807, reflecting a strong positive relationship between the predictors—corporate culture and innovation practices—and the dependent variable, organizational performance." This implies that improvements in both corporate culture and innovation practices are likely to lead to significant enhancements in the performance of commercial state corporations. Additionally, "the R-squared value of 0.652 suggests that approximately 65.2% of the variation in organizational performance can be accounted for by the combined influence of corporate culture and innovation practices. This is a substantial proportion, indicating that the model captures a significant amount of the variability in performance outcomes." Further the coefficients of corporate culture on organisational performance when the mediator innovation practice is controlled to be ß =0.399 and its significant p-value = 0.049 < 0.05. So the relationship between corporate culture and organisational performance is still significant when the mediator innovation practice is controlled." The study shows that innovation practice is a partial mediator in the relationship between corporate culture and performance commercial state corporations in Kenya. This is proven by the fact that the coefficients between corporate culture and organisational performance is ß =0.699 and its significant p-value = 0.000 < 0.05. "This coefficient value reduces to ß =0.298 when a mediator innovation practice is introduced in the relationship between corporate culture and organisational performance and therefore this means that innovation practice partially mediates the relationship between corporate culture and organisational performance commercial state corporations in Kenya." Thus the null hypothesis (Ho_2), which posited that innovation practice has no intervening role on the relationship between corporate culture and performance of commercial state corporations in Kenya, was rejected.

The study results are in concurrence with by Waringa Wanjiku (2014) on the relationship between innovation practice and performance of the micro and small enterprises (MSEs) in Kiambu Town Kenya, The study found and concluded that Process, Product, Positioning and Paradigm types of innovation practice had a positive relationship with the performance of some business types of the Micro and Small Enterprises in Kiambu Town. It was recommended that embracing innovation practice after research which suits which Micro and Small enterprise best. The study further proposed several considerations: implement tax incentives to spur innovation practice, involving key stakeholders in the business types and academia in research and development (R&D), develop policies to encourage innovation practice listed in this study, identify and reward innovative MSEs to promote innovation practice, initiate programs that tap innovators, and encourage Banks and other stakeholders to fund more viable innovative ideas. However, the study results are not agreement with their study by Omondi, Rotich, Katuse, and Senaji (2017) who examined the correlation between organisational structure and performance within the commercial banking sector in Kenya. The researchers also explored the potential mediating influence of innovation in this connection. The results indicated that the organisational structure did not exert a statistically significant impact on innovation and performance within the commercial banking sector in Kenya.

The results suggest that both corporate culture and innovation practice significantly influence organizational performance, but innovation practice has a stronger direct impact. This supports the hypothesis “that innovation practice mediates the relationship between corporate culture and organizational performance. Corporate culture provides the foundation for fostering an environment conducive to innovation, while innovation practice operationalizes this culture into actionable strategies that directly enhance performance. The findings align with existing literature, which emphasizes the importance of innovation as a critical driver of organizational success.” For example, “studies have shown that organizations with a strong culture of innovation are better equipped to adapt to changing market conditions, improve efficiency, and achieve competitive advantages. In this context, innovation practice acts as a bridge, translating the positive attributes of corporate culture into tangible performance outcomes.” For commercial state corporations in Kenya, these results underscore the need to prioritize both corporate culture and innovation practice. While corporate culture lays the groundwork by fostering values such as collaboration, creativity, and adaptability, innovation practice ensures that these cultural attributes are effectively implemented to drive performance. Managers should focus on creating a culture that encourages experimentation and risk-taking while simultaneously investing in systems and processes that support innovation.

4.8.3 Corporate culture, regulatory framework and performance of commercial state corporations in Kenya

The third objective of the study was “to examine the moderating effect of the regulatory framework on the relationship between corporate culture and the performance of commercial state corporations in Kenya. The descriptive statistics revealed an overall mean score of 3.69 with a standard deviation of 0.880.” Among the statements, "Compliance with Mwongozo strengthens boards, ensures effective oversight, and increases operational efficiency" recorded the highest mean score of 4.23 indicating that respondents strongly believe adherence to Mwongozo, a governance framework for state corporations, is crucial for enhancing board effectiveness and improving overall operational efficiency. This high rating highlights the recognition of the importance of regulatory compliance in fostering good governance practices. Additionally, the statement "Public Investment Committee should review all key reports submitted to them to hold the government’s executive branch to account for its SC-related fiscal and expenditure policies and implementation" scored 4.18, reflecting a strong belief in the necessity of accountability mechanisms within the regulatory framework. Respondents demonstrate a clear value for the role of oversight committees in ensuring that fiscal policies and expenditures are properly managed, which is essential for maintaining transparency and accountability in state corporations.

The average score of 3.69 across all indicators reflects a generally positive perception of the regulatory framework, yet it also highlights significant opportunities for improvement. The findings suggest that while there is strong support for compliance and accountability mechanisms, challenges persist in areas such as data reliability, legal harmonization, and the efficiency of performance monitoring processes. Addressing these challenges was essential for enhancing the overall effectiveness of the regulatory framework and ensuring that it meets the needs of all stakeholders involved. The descriptive analysis reveals that the regulatory framework is perceived as relevant to the performance of commercial state corporations in Kenya. However, "the results also highlight critical areas that require attention, particularly in enhancing data reliability, streamlining performance contracting processes, and adopting technology for better monitoring and management. Addressing these issues would be essential for improving the overall effectiveness of the regulatory framework and, consequently, the performance of state corporations."

The current study results are in agreement with Elizabeth Mohammed (2019) study to examine the influence of government regulations on the performance of small and medium enterprises (SMEs) in the automobile parts industry within Nairobi, Kenya. Findings from the study revealed that 76.6% of respondents were familiar with tax administration, and the integration of tax systems significantly influenced SME operations, with 65% of respondents reporting adverse effects. Additionally, licensing procedures and regulations were found to impact business operations, as indicated by 76.6% of respondents. "The descriptive analysis reveals that the regulatory framework is perceived as relevant to the performance of commercial state corporations in Kenya." However, the results also highlight critical areas that require attention, particularly in enhancing data reliability, streamlining performance contracting processes, and adopting technology for better monitoring and management. Addressing these issues would be essential for improving the overall effectiveness of the regulatory framework and, consequently, the performance of state corporations.

The correlation coefficient of 0.722 demonstrates a strong positive relationship between the regulatory framework and organizational performance, indicating that a well-structured regulatory environment positively influences the performance of these firms. Furthermore, the significance level of 0.000 reinforces the reliability of this finding, underscoring the importance of an effective regulatory framework in enhancing organizational success. The positive correlation between the regulatory framework and organizational performance suggests that firms should advocate for and engage with policymakers to ensure that regulations support business operations. This could involve participating in discussions about regulatory reforms that facilitate innovation and reduce bureaucratic hurdles. The study findings align with Karungani and Ochiri (2020), who investigated the impact of policy and regulatory frameworks on organizational performance in Nairobi County. Their research demonstrated that such frameworks play a vital role in enhancing organizational performance by establishing a level playing field for organizations involved in procurement activities. Furthermore, the study highlighted that the policy and regulatory framework improved transparency, openness, ethical standards, impartiality, and decision-making processes within organizations.

Consequently, "the study findings led to the rejection of the third null hypothesis, establishing that the regulatory framework plays a moderating role in the relationship between corporate culture and the performance of commercial state corporations in Kenya. The results from Model 1 show a correlation coefficient (R) of 0.807, indicating a strong positive relationship between the predictors—corporate culture and regulatory framework—and the dependent variable, organizational performance. The R-Squared (R^2) value of 0.652 suggests that about 65.2% of the variation in organizational performance can be accounted for by these two factors, underscoring their significant influence on performance outcomes." In Model 2, the correlation coefficient (R) increases to 0.820, indicating an even stronger positive relationship when the interaction term the product of corporate culture and regulatory framework is included in the model. This enhanced relationship is reflected in the R-Squared (R^2) value of 0.672, which shows that approximately 67.2% of the variance in organizational performance can be explained by the model, marking an increase from Model 1. This suggests that the interaction between corporate culture and the regulatory framework significantly enhances the understanding of performance outcomes. The change statistics reveal that the R-squared change of 0.020 signifies that the interaction term adds a small but significant amount of explanatory power, while the F-change statistic of 10.897, with a significance level of 0.001, confirms that the inclusion of the interaction term significantly improves the model's fit.

On the model coefficients, In Model 1, “corporate culture has a significant positive effect on performance. However, in Model 2, its direct effect becomes insignificant, suggesting that its influence on performance is moderated by the regulatory framework. This indicates that corporate culture alone may not drive performance unless supported by an enabling regulatory environment.” The regulatory framework consistently shows a strong positive effect on performance in both models. This underscores its importance as a key driver of organizational success in commercial state corporations. The interaction term in Model 2 is significant, “confirming that the regulatory framework moderates the relationship between corporate culture and performance. This means that the impact of corporate culture on performance is contingent on the regulatory framework.” A supportive regulatory framework enhances the positive effects of corporate culture on performance.

These results are in agreement with the study by Oketch, Kilika and Kinyua (2020) who examined the moderating effect of the legal environment on the relationship between top management team characteristics and organizational performance of the independent regulatory agencies in Kenya. The study findings indicated “that the legal environment significantly moderates the relationship between top management team characteristics and the performance of independent regulatory agencies in Kenya.” It is recommended that these agencies establish stable funding mechanisms to reduce reliance on parent ministries or government treasury support, ensuring financial independence in carrying out their mandates. Additionally, the current study results concur with In a study conducted in 2019, Odero, Egessa, and Oseno (2019) examined the moderating influence that “legal considerations have on the link between strategic leadership practises and performance of Deposit Taking SACCOS in Kenya.” According to the findings, the role that legal variables had in modulating the association between strategic leadership practises and performance of Deposit Taking SACCOS in Kenya was substantial. According to the findings of the research, “strategic leaders have to have an awareness of legal aspects in order to generate improved organisational performance. The results from the model coefficients highlight the critical role of the regulatory framework in moderating the relationship between corporate culture and performance.” While corporate culture and the regulatory framework independently contribute to performance, their combined effect (captured by the interaction term) is particularly significant. These findings emphasize the need for a holistic approach that integrates both organizational and regulatory factors to drive the performance of commercial state corporations in Kenya.

4.8.4 Corporate culture, innovation practice, regulatory framework and performance of commercial state corporations in Kenya

The fourth objective of the study was to “investigate the moderating effect of the regulatory framework on the mediating role of innovation practice in the relationship between corporate culture and the performance of commercial state corporations in Kenya. This objective was guided by the hypothesis that there is no significant moderated mediation effect of regulatory framework and innovation practice on this relationship.” The study findings led to the rejection of the null hypothesis. The overall model fit for performance revealed “an R-squared value of 0.6725, indicating that 67.25% of the variance in performance is explained by the predictors, with an F-statistic of 89.3387 ($p < 0.0001$), confirming the model’s statistical significance. Furthermore, the results indicated a significant moderated mediation effect. The index of moderated mediation was -0.0202, with a bootstrapped standard error of 0.0065 and a 95% bias-corrected bootstrap confidence interval ranging from -0.0333 to -0.0077, which does not include zero.” This confirms that the regulatory framework significantly moderates the mediating effect of innovation practice on the relationship between corporate culture and performance.

The study examined the moderated mediation, also referred to as the conditional indirect effect. This occurs when the independent variable (corporate culture) influences the dependent variable (performance) directly, as well as indirectly through the mediating variable (innovation practice), with both the direct and indirect effects being affected by the moderating variable (regulatory framework). At a low regulatory framework level (10.1931), the indirect effect is significant (effect = 0.2295, BootSE = 0.1508, BootLLCI = 0.0821, BootULCI = 0.5125), suggesting that a less restrictive regulatory environment allows corporate culture to positively influence performance through innovation practice. At a moderate regulatory framework level (15.8889), the indirect effect remains positive but is weaker and not statistically significant (effect = 0.1145, BootSE = 0.1398, BootLLCI = -0.1722, BootULCI = 0.3808). At a high regulatory framework level (19.5000), the indirect effect diminishes further and becomes non-significant (effect = 0.0417, BootSE = 0.1376, BootLLCI = -0.2384, BootULCI = 0.3059), indicating that stringent regulations may hinder the ability of corporate culture to indirectly enhance performance through innovation practice. “These findings underscore the importance of fostering a supportive regulatory environment to maximize the positive impact of corporate culture and innovation practices on organizational performance”.

These results conform to the study by Joseph et al. (2022) on the “moderated mediated influence of external environment and strategy execution on strategic leadership and organisation performance in Kenyan agricultural, livestock, and fisheries parastatals. The findings indicated that strategic leadership style directly influences the organizational performance of Agricultural, Livestock, and Fisheries parastatals in Kenya, with this relationship being moderated by the external environment and showing a significant interaction effect.” Additionally, there is an indirect relationship through strategy implementation at different levels of the external environment, which is also significant. These results align with Shafique, Anam, and Naveed (2019), “who examined the mediating effects of innovative culture and organizational learning on the relationship between leadership styles and organizational performance in Malaysian SMEs.” Their study revealed that both innovative culture and organizational learning significantly impact organizational performance and serve as important mediators between leadership styles and performance outcomes.

These findings have several implications for commercial state corporations in Kenya. First, “the significant role of innovation practice in driving performance highlights the need for organizations to prioritize and invest in innovative strategies and practices.” Second, “while corporate culture alone may not directly enhance performance, its influence is mediated through innovation practice, emphasizing the importance of aligning cultural values with innovation goals." Third, "the regulatory framework plays a critical moderating role; a less restrictive regulatory environment enables corporate culture to exert a stronger positive influence on performance through innovation. Policymakers should consider creating a supportive regulatory environment that fosters innovation while avoiding overly stringent regulations that may hinder organizational performance." Lastly, "the non-significant interaction effects suggest that the combined influence of corporate culture and regulatory framework on performance is complex and may require further exploration to uncover additional mediating or moderating factors." In conclusion, the study underscores the importance of innovation practice as a mediator and highlights the nuanced role of the regulatory framework in shaping the relationship between corporate culture and performance. Organizations should focus on fostering innovation and advocating for regulatory policies that support, rather than constrain, their innovative efforts.

4.9 Summary of Research Findings

Regarding the first study objective, "the findings revealed a significant positive impact of corporate culture on the performance of commercial state corporations in Kenya. Descriptive statistics indicated an overall favorable perception of corporate culture, with a mean score of 3.95 and high ratings for factors such as security of tenure (4.06), innovation (4.03), teamwork, and mutual trust (both 4.01), highlighting their role in promoting a supportive and collaborative work environment. The model results showed a strong positive correlation ($R = 0.670$) between corporate culture and performance, with corporate culture explaining 45% of the variation in organizational performance ($R^2 = 0.450$)." The unstandardized coefficient of 0.699 suggested that a one-unit increase in corporate culture leads to a 0.699-unit increase in performance, with the relationship being statistically significant ($t = 12.023$, $p = 0.000$). These results led to the rejection of the null hypothesis, confirming that corporate culture has a significant influence on the performance of commercial state corporations in Kenya, while also indicating that other factors, such as innovation practices or regulatory frameworks, account for the remaining variation in performance.

Regarding the second study objective, "the research examined the mediating role of innovation practices in the relationship between corporate culture and the performance of commercial state corporations in Kenya." Descriptive statistics indicated a high overall mean score of 4.05, reflecting strong agreement among respondents on the importance of innovation, with statements such as "Market innovation practice plays a crucial role in fulfilling market needs" receiving a mean score of 4.27. These results emphasize the key role of innovation in meeting customer demands and driving organizational success. The analysis revealed “a strong positive correlation ($R = 0.807$) between corporate culture, innovation practices, and organizational performance, with 65.2% of the variance in performance explained by these factors ($R^2 = 0.652$). The study further established that innovation practices partially mediate the relationship between corporate culture and performance, as evidenced by the decrease in the coefficient for corporate culture from ß = 0.699 to ß = 0.298 when innovation was included as a mediator”. This partial mediation highlights the critical contribution of innovation practices in strengthening the effect of corporate culture on performance. Accordingly, the null hypothesis that innovation practices do not mediate this relationship was rejected, confirming their significant influence on organizational performance.

The third objective of the study focused on “assessing the moderating effect of the regulatory framework on the relationship between corporate culture and the performance of commercial state corporations in Kenya.” The findings indicated that compliance with governance frameworks, such as Mwongozo, substantially improves board effectiveness and operational efficiency, reflected by a high mean score of 4.23. Mechanisms of accountability, including oversight by the Public Investment Committee, were also highly regarded, with a mean score of 4.18. Statistical results demonstrated “a strong positive relationship between corporate culture, regulatory framework, and organizational performance.” Specifically, Model 1 explained 65.2% of the variance in performance ($R^2 = 0.652$), while Model 2, which incorporated the interaction term, accounted for 67.2% of the variance ($R^2 = 0.672$). The addition of the interaction term contributed a modest but statistically significant increase in explanatory power (R^2 change = 0.020, F-change = 10.897, $p = 0.001$), confirming that the regulatory framework significantly moderates the relationship between corporate culture and organizational performance.

The final objective of the study “investigated the moderating role of the regulatory framework on the mediating effect of innovation practice in the relationship between corporate culture and the performance of commercial state corporations in Kenya. The findings led to the rejection of the null hypothesis, confirming a significant moderated mediation effect." The model accounted for 67.25% of the variance in performance ($R^2 = 0.6725$, $F = 89.3387$, $p < 0.0001$), with a significant moderated mediation index (-0.0202, 95% CI: -0.0333 to -0.0077). The results indicated that a less restrictive regulatory framework strengthens the positive indirect effect of corporate culture on performance via innovation practice, whereas a more stringent regulatory environment reduces this effect. At low levels of regulatory stringency, the indirect effect was significant, but it weakened and became non-significant at moderate and high regulatory levels. "These findings underscore the critical role of a supportive regulatory environment in enhancing the combined impact of corporate culture and innovation practices on organizational performance."

4.10 Optimal Model

Based on the study's findings, the model was optimized to develop a final version that includes only the significant variables, thereby improving its accuracy and objectivity. The results were derived from regression analysis, and the updated conceptual framework is depicted in Figure 12. This optimal model, illustrated in Figure 12, "serves as a refined representation that integrates the relationships identified in the conceptual framework while emphasizing the most effective strategies for achieving Organisational Performance among commercial state corporations in Kenya, based on empirical evidence. The development of the optimal model involved thorough testing and validation of the empirical data to ensure it accurately captures the dynamics of the relevant variables, thereby maximizing both predictive power and explanatory capacity." R-squared values were employed to illustrate the model's explanatory strength concerning the predictor variables of the study, which include Innovation practice, Corporate Culture, Regulatory Framework, and Organisational Performance of commercial state corporations in Kenya.

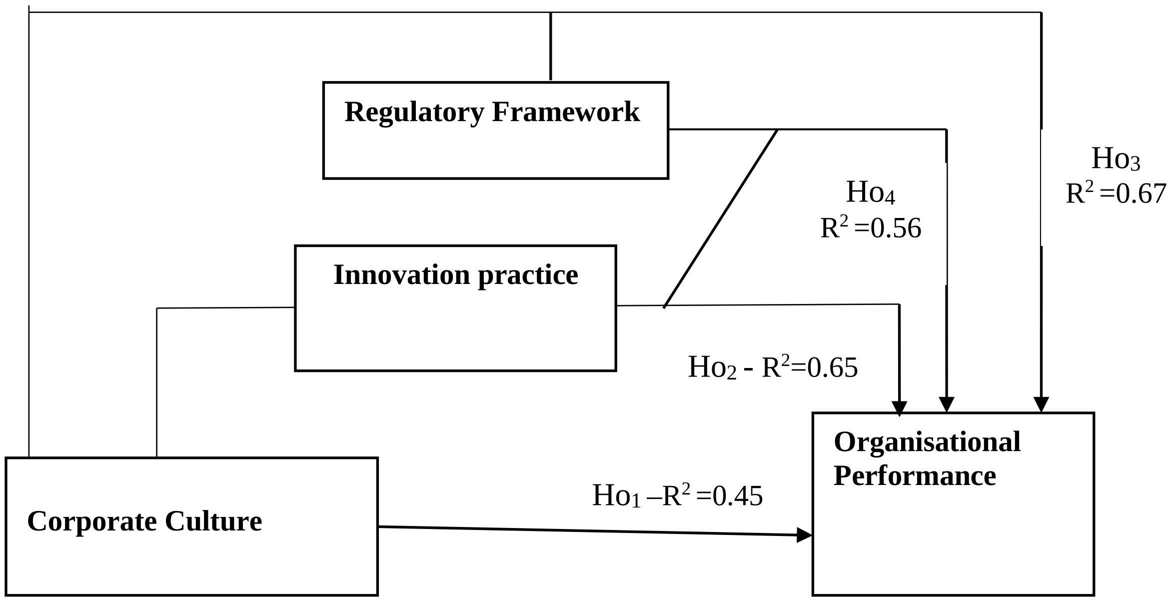


Figure 12: Optimal Model

4.11 Chapter Summary

This chapter presents the findings of the study, "which examined the influence of corporate culture, innovation practice, and regulatory framework on the performance of commercial state corporations in Kenya. It details the analysis of response rates, demographic characteristics, descriptive statistics, factor analysis, diagnostic tests, and inferential statistics." The chapter also evaluates the research data in relation to the study's key objectives, providing a summary of the major findings from the hypothesis tests along with relevant discussions. Overall, the study aimed to determine how corporate culture, innovation practice, and regulatory framework impact the performance of commercial state corporations in Kenya.

CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter provides a summary of the key findings and conclusions of the study. The research aimed to examine the influence of corporate culture, innovation practice, regulatory framework, and performance of commercial state corporations in Kenya. Both descriptive and inferential statistical analyses were employed to test the study hypotheses. The outcomes of these analyses were then used to summarize the most significant findings and draw conclusions aligned with the objectives of the research.

5.1 Summary of the findings

The first objective of the study examined how corporate culture influences the performance of commercial state corporations in Kenya. Respondents expressed strong positive beliefs about their corporate culture, emphasizing aspects such as job security, innovation, teamwork, and mutual trust. For instance, management practices that promote job security were seen as a critical component of a supportive corporate culture. Innovation and the encouragement of proactive behavior were also highly valued, indicating that employees feel empowered to seek opportunities and think creatively. Teamwork and mutual trust were highlighted as essential elements for fostering collaboration and open communication within organizations, further enhancing performance. Overall, the findings demonstrate a generally positive perception of corporate culture among respondents, underlining its significant role in driving organizational success. By fostering a corporate culture focused on collaboration, innovation, trust, and goal achievement, organizations can improve their effectiveness and achieve better operational outcomes. These insights highlight the critical importance of prioritizing strong cultural elements to enhance the performance of commercial state corporations in Kenya.

The study conclusively established that "corporate culture significantly and positively influences the performance of commercial state corporations in Kenya, leading to the rejection of the null hypothesis. A correlation coefficient of R = 0.670 indicates a strong positive relationship, suggesting that improvements in corporate culture are likely to enhance organizational performance. The R Square value of 0.450 reveals that corporate culture accounts for 45% of the variation in performance outcomes, while the remaining 55% may be influenced by other factors such as innovation practices or external regulations.” The study findings established that corporate culture has a significant and positive influence on the performance of commercial state corporations in Kenya, leading to the rejection of the null hypothesis. The results demonstrated a strong positive relationship between corporate culture and organizational performance, as indicated by a high correlation coefficient. This suggests that improvements in corporate culture are likely to enhance the performance of these organizations. Furthermore, corporate culture was found to account for 45% of the variation in organizational performance, highlighting its substantial role as a performance driver, although other factors such as innovation practices or regulatory frameworks may also contribute to the remaining variation. The model coefficients revealed that even small improvements in corporate culture could result in notable increases in organizational performance, with the relationship being statistically significant. These findings underscore the critical importance of corporate culture in shaping the success of commercial state corporations in Kenya. By fostering a strong and supportive corporate culture, organizations can significantly improve their effectiveness and achieve better operational outcomes. Consequently, “the study concluded that corporate culture is a key determinant of organizational performance in this context.”

The study's second objective focused on “determining the mediating role of innovation practices in the relationship between corporate culture and the performance of commercial state corporations in Kenya. The findings reveal a strong and positive perception of innovation practices among respondents, as reflected by consistently high mean scores across various dimensions of innovation.” Respondents strongly agreed that innovation is critical for operational success, especially in meeting customer demands and driving sales growth. Statements such as "Market innovation practice plays a crucial role in fulfilling market needs in the organization" and "A firm that is constantly introducing new product offerings is more likely to achieve higher sales volumes" demonstrated significant support for the importance of innovation. Low standard deviation values indicate consistent agreement among respondents, reinforcing the shared belief that innovation practices are essential for enhancing competitiveness and addressing market needs. This consensus underscores the role of innovation in enabling organizations to adapt to changing market conditions and seize opportunities in a dynamic environment. The findings highlight that innovation is viewed as a key driver of performance for commercial state corporations. By prioritizing practices such as product development and process improvements, these organizations can maintain their competitiveness and achieve sustainable growth. The study highlights the significant role of innovation in addressing market demands and exploring new opportunities, particularly for health insurance providers in Kenya. It concludes that both process innovation and market innovation positively influence organizational performance. Descriptive analysis reveals a positive perception of innovation as a driver of competitiveness and sustainable growth. The findings emphasize the importance of prioritizing innovation practices, including product development and process improvements, to enhance performance and adapt to a dynamic market environment.

The study found a "strong positive relationship between innovation practices and organizational performance, with a correlation coefficient of 0.770 and a significance level of 0.000, highlighting the essential role of innovation in enhancing the success of commercial state corporations in Kenya." Moreover, "the combined effect of corporate culture and innovation practices on organizational performance is underscored by a correlation coefficient (R) of 0.807 and an R-squared value of 0.652, indicating that 65.2% of the variation in performance is explained by these factors." The findings also revealed that innovation practice partially mediates the relationship between corporate culture and organizational performance, as shown by the decrease in the coefficient from ß = 0.699 ($p < 0.05$) to ß = 0.298 when innovation practice is included as a mediator. Even with the mediator controlled, corporate culture significantly influences performance (ß = 0.399, $p = 0.049$). This confirms that innovation enhances the link between corporate culture and performance, leading to the rejection of the null hypothesis (Ho_2) that innovation has no intervening role. Thus, the study underscores the importance of prioritizing innovation strategies, such as investment in research and development and adopting new technologies, to improve efficiency, service delivery, and overall organizational performance. The study reveals that both corporate culture and innovation practice significantly influence organizational performance, with innovation practice having a stronger direct impact. This supports the hypothesis that innovation practice mediates the relationship between corporate culture and performance, acting as a bridge that translates cultural attributes into actionable strategies to enhance outcomes. Corporate culture fosters an environment conducive to innovation by promoting values such as collaboration, adaptability, and creativity, while innovation practice operationalizes these values to improve efficiency, adapt to market changes, and gain competitive advantages. For commercial state corporations in Kenya, "the findings highlight the need to prioritize both factors, as innovation practice translates the positive aspects of corporate culture into tangible performance improvements." Managers are encouraged to cultivate a culture that promotes experimentation and risk-taking while investing in systems and processes that facilitate innovation, ensuring sustainable growth and competitiveness. Consequently, the null hypothesis that innovation practice has no intervening role was rejected, demonstrating that both corporate culture and innovation practice are essential for improving performance outcomes in commercial state corporations.

The third objective of the study was to "assess how the regulatory framework moderates the relationship between corporate culture and the performance of commercial state corporations in Kenya. Descriptive statistics indicated a generally favorable perception of the regulatory framework, with a mean score of 3.69, although there were notable areas identified for improvement. Strongest agreement was observed for the importance of Mwongozo compliance in strengthening boards and operational efficiency (mean 4.23), and the necessity of Public Investment Committee oversight for accountability (mean 4.18). These findings underscore the perceived value of regulatory compliance and accountability mechanisms. However, the study also identified key challenges, including data reliability, legal harmonization, and efficient performance monitoring. Respondents emphasized the need for better data, streamlined performance contracting, and technological advancements in monitoring and management. While the framework is considered relevant to state corporation performance, addressing these identified weaknesses is crucial for enhancing its overall effectiveness and ultimately driving improved performance within these organizations. Improving the regulatory framework would better support the positive influence of corporate culture on state corporation performance.

The study found that "the regulatory framework moderates the relationship between corporate culture and the performance of commercial state corporations in Kenya, resulting in the rejection of the third null hypothesis. Model 1 showed a strong positive association among corporate culture, the regulatory framework, and organizational performance, with a correlation coefficient

(R) of 0.807 and an R-squared value of 0.652, indicating that 65.2% of the variation in performance is accounted for by these factors.” In Model 2, “the inclusion of an interaction term (corporate culture × regulatory framework) further strengthened this relationship, with the correlation coefficient (R) increasing to 0.820 and the R-squared value rising to 0.672, explaining 67.2% of the variance in performance.” The interaction term's significance, supported by an R-squared change of 0.020 and an F-change statistic of 10.897 ($p = 0.001$), demonstrated that the regulatory framework significantly enhances the effect of corporate culture on performance. Notably, in Model 2, the direct effect of corporate culture on performance becomes insignificant, emphasizing the necessity of a supportive regulatory framework to amplify its impact. These findings underscore the critical role of an enabling regulatory environment in strengthening the positive influence of corporate culture on organizational performance, highlighting the importance of regulatory compliance and governance in driving success within commercial state corporations. The results from the model coefficients highlight the critical role of the regulatory framework in moderating the relationship between corporate culture and performance. While corporate culture and the regulatory framework independently contribute to performance, their combined effect (captured by the interaction term) is particularly significant. These findings emphasize the need for a holistic approach that integrates both organizational and regulatory factors to drive the performance of commercial state corporations in Kenya.

The fourth objective of the study was “to assess the moderating influence of the regulatory framework on the mediating role of innovation practice in the relationship between corporate culture and the performance of commercial state corporations in Kenya. The findings led to the rejection of the null hypothesis, confirming a significant moderated mediation effect. The overall model demonstrated an R-squared value of 0.6725, indicating that 67.25% of the variance in performance was explained by the predictors, with an F-statistic of 89.3387 ($p < 0.0001$), confirming the model’s statistical significance.” Additionally, the moderated mediation index of -0.0202, tested using a bootstrapped standard error of 0.0065 and a 95% bias-corrected confidence interval ranging from -0.0333 to -0.0077 (excluding zero), further verified that the effect was statistically significant. These results demonstrate that the regulatory framework significantly moderates the mediation effect of innovation practice, meaning the strength and nature of innovation practice's influence on the relationship between corporate culture and performance are contingent upon the regulatory framework. This underscores the importance of a supportive regulatory environment in enhancing the impact of corporate culture and innovation practices on organizational performance.

This study examined the moderated mediation (conditional indirect effect) of corporate culture on organizational performance, mediated by innovation practice and moderated by the regulatory framework. Results indicated that at low regulatory framework levels, corporate culture significantly and positively influences performance through innovation. However, this indirect effect weakens and becomes non-significant at moderate regulatory framework levels, and diminishes further to non-significance at high regulatory framework levels. This suggests that while corporate culture can drive performance through innovation in less restrictive regulatory environments, increasingly stringent regulations may impede this positive relationship. The findings highlight the crucial role of a supportive regulatory framework in maximizing the beneficial impact of corporate culture and innovation on organizational performance.

5.2 Study conclusions

In conclusion, this study demonstrates the significant influence “of corporate culture on the performance of commercial state corporations in Kenya.” The high mean scores across various corporate culture dimensions, particularly regarding job security, valuing originality and opportunity seeking, teamwork, and mutual trust, reveal a generally positive perception of corporate culture within these organizations. These findings suggest that a strong corporate culture, characterized by these elements, is crucial for enhancing organizational performance. Cultivating a supportive environment that prioritizes collaboration, innovation, and a results-oriented approach can lead to improved effectiveness and better outcomes for these corporations. Ultimately, fostering a positive corporate culture is essential for driving success and achieving organizational objectives within the context of Kenyan state corporations.

This study robustly demonstrates “the significant and positive influence of corporate culture on the performance of commercial state corporations in Kenya, thereby rejecting the null hypothesis.” The strong positive correlation ($R = 0.670$) and substantial explanatory power ($R^2 = 0.450$) of corporate culture on organizational performance highlight its critical role. “The regression analysis confirms this, revealing a significant positive relationship where a one-unit increase in corporate culture leads to a 0.699-unit increase in performance ($p < 0.000$), further emphasized by the substantial standardized coefficient ($B = 0.670$)." These findings have significant practical implications, urging Kenyan state corporations to prioritize building and nurturing a positive corporate culture through shared values, employee engagement, and alignment of cultural practices with organizational goals. Integrating cultural assessments into strategic planning and performance evaluations is also recommended. While corporate culture is a key driver, the remaining performance variation suggests that other factors, such as innovation and regulatory frameworks, also contribute, warranting further investigation. Ultimately, this study underscores the vital importance of a robust corporate culture for achieving improved performance outcomes in Kenyan state corporations

The study strongly suggests that innovation practices are perceived as crucial for enhancing the performance of commercial state corporations in Kenya. Respondents widely agree that innovation, particularly in meeting market needs and introducing new products is essential for organizational success and driving sales growth. The consistent and high ratings across various aspects of innovation reflect a shared understanding of its importance in maintaining competitiveness and responding to evolving market demands. These findings emphasize the collective recognition within these corporations of the need for continuous improvement and adaptation through innovation to effectively navigate the competitive landscape and capitalize on available opportunities. Ultimately, the study highlights the perceived vital role of innovation in bolstering the performance of Kenyan state corporations.

This study presents strong evidence supporting "the mediating role of innovation practice in the relationship between corporate culture and performance in Kenyan state corporations, resulting in the rejection of the null hypothesis. The high positive correlation ($R = 0.807$) between corporate culture, innovation practices, and organizational performance indicates that enhancements in these areas are likely to substantially improve performance." The findings highlight the pivotal role of innovation practice as a mediator linking corporate culture to organizational performance. Corporate culture establishes the foundation for organizational values and behaviors, while innovation practice operationalizes these values into actionable strategies that drive performance. A culture that fosters creativity, collaboration, and adaptability enables the implementation of innovative practices, leading to enhanced efficiency, improved processes, and effective responses to market demands. Kenyan state corporations, integrating innovation practices into organizational strategies is essential for maximizing the positive effects of corporate culture on performance. Innovation practice acts as a bridge, translating cultural strengths into tangible results. By fostering an innovation-driven culture, organizations encourage experimentation, the development of innovative solutions, and adaptation to external challenges, ultimately improving performance. Therefore, prioritizing innovation as a strategic mediator is crucial for enhancing the performance of these corporations.

The study reveals a generally positive perception of the regulatory framework's relevance to the performance of Kenyan state corporations, though significant opportunities for improvement exist. While strong support for compliance with Mwongozo and accountability mechanisms like Public Investment Committee oversight is evident, challenges persist. Specifically, issues surrounding data reliability, legal harmonization, and the efficiency of performance monitoring processes require attention. Addressing these critical areas, including enhancing data reliability, streamlining performance contracting, and adopting technology for improved monitoring and management, is essential for strengthening the regulatory framework's effectiveness and ultimately enhancing the performance of these state corporations. Only by tackling these challenges can the regulatory framework fully support and enable optimal performance within Kenya's commercial state corporations.

The study concludes that the regulatory framework plays a significant moderating role in the relationship between corporate culture and performance in Kenyan state corporations, resulting in the rejection of the null hypothesis. A strong positive relationship exists between these variables, with the regulatory framework demonstrably enhancing the influence of corporate culture on performance. The increased explained variance when the interaction term is included highlights this moderating effect, showing that corporate culture's impact on performance is contingent upon the regulatory environment. Specifically, a supportive regulatory framework amplifies the positive effects of corporate culture, while a restrictive one can hinder them. Therefore, aligning corporate culture with a favorable regulatory framework is crucial for maximizing performance in these corporations, emphasizing the need for policymakers to create enabling regulatory conditions that complement corporate culture and drive improved outcomes.

In summary, this study presents strong evidence of a moderated mediation effect of the regulatory framework "on the relationship between corporate culture, innovation practice, and organizational performance in Kenyan commercial state corporations. The rejection of the null hypothesis confirms that the regulatory framework significantly influences the magnitude and direction of innovation practice's mediating role. The findings indicate that 67.25% of the variance in organizational performance is accounted for by corporate culture, innovation practice, and the regulatory framework, highlighting the combined importance of these factors." A significant moderated mediation effect, as indicated by the index of moderated mediation and its confidence interval, demonstrates that the regulatory framework conditions the indirect effect of corporate culture on performance through innovation practice. Specifically, while corporate culture positively influences performance through innovation in less restrictive regulatory environments, this effect weakens and becomes non-significant as regulatory constraints increase. These findings highlight the dual importance of fostering a strong corporate culture and creating a supportive regulatory environment that balances oversight with flexibility. Policymakers and organizational leaders must ensure that regulatory frameworks encourage rather than hinder innovation, enabling organizations to leverage their cultural strengths to drive performance. This study contributes to the growing body of knowledge on organizational behavior and performance, emphasizing the interplay between corporate culture, innovation, and regulatory frameworks in achieving sustainable success.

5.3 Recommendation

Based on research findings and conclusions of this study, the key recommendations are described in these sub-sections.

5.3.1 Recommendations on corporate culture and performance

Based on the study results indicating a generally positive perception of corporate culture in commercial state corporations in Kenya, it is recommended that these organizations continue to cultivate a supportive environment characterized by job security, innovation, and teamwork, as reflected in the favorable responses to relevant statements. Specifically, corporations should reinforce initiatives that promote job security to maintain employee confidence and satisfaction actively encourage originality and resource acquisition to foster innovation, and enhance collaborative relationships through team-building activities that strengthen mutual trust. Additionally, there should be a concerted effort to improve goal-setting processes by ensuring that managers and subordinates work together to establish ambitious yet realistic objectives while remaining responsive to market changes to enhance organizational agility. By prioritizing these cultural elements, commercial state corporations can significantly improve their operational effectiveness and overall performance, ultimately better serving their public mandates.

The study results established “a strong positive relationship between corporate culture and the performance of commercial state corporations in Kenya; it is recommended that organizations prioritize the enhancement of their corporate culture to improve overall performance. Given that corporate culture accounts for a significant portion of the variation in organizational performance, state corporations should implement initiatives that foster a supportive and innovative work environment.” This can be achieved by promoting values that encourage collaboration, trust, and open communication among employees, which are essential for a thriving corporate culture. Additionally, organizations should invest in training and development programs that align with their corporate values, ensuring that employees are equipped with the necessary skills and knowledge to contribute effectively to the organization's goals. Regular assessments of corporate culture should be conducted to identify areas for improvement and to ensure that the culture remains aligned with the organization's objectives. Furthermore, while corporate culture is a critical factor, it is important to recognize that other elements, such as innovation practices and regulatory frameworks, also influence performance. Therefore, state corporations should adopt a holistic approach that integrates improvements in corporate culture with advancements in innovation and compliance with regulatory standards. By doing so, “they can create a more resilient and adaptable organization that is better positioned to meet the challenges of a dynamic market environment and achieve sustained success.”

5.3.2 Recommendations on corporate culture, innovation practice and performance

The study results indicated a strong perception of innovation practices in commercial state corporations in Kenya, it is recommended that these organizations prioritize and enhance their innovation efforts to fully leverage the consensus on its significance. Given the emphasis on market and process innovation, organizations should actively invest in market research and development initiatives to ensure their product offerings effectively meet customer demands. Additionally, corporations should strengthen their focus on process innovation, which has been shown to enhance customer loyalty and increase market share, by implementing training programs and adopting best practices that streamline operations. Furthermore, the recognition of technology's role in innovative marketing strategies suggests that state corporations should integrate advanced technologies into their marketing efforts to remain competitive in a rapidly evolving market landscape. However, the moderate perceptions regarding market innovation's impact on survival and the influence of improved products on sales volumes indicate a need for further exploration and communication about how these innovations directly contribute to organizational resilience and performance. By fostering a culture of continuous improvement and adaptation, commercial state corporations in Kenya can better position themselves to meet emerging challenges and seize new opportunities, ultimately enhancing their overall performance and competitiveness in the market.

The study results revealed “the mediating effect of innovation practices in the relationship between corporate culture and the performance of commercial state corporations in Kenya, it is recommended that organizations focus on enhancing both their corporate culture and innovation practices to drive improved performance outcomes.” Given the strong positive correlation between these factors, state corporations should prioritize initiatives that foster a robust corporate culture characterized by collaboration, trust, and a commitment to continuous improvement. To leverage the mediating effect of innovation practices, organizations should actively encourage and support innovative thinking among employees. “This can be achieved through training programs, workshops, and incentives that promote creativity and the development of new ideas.” By creating an environment that values innovation, corporations can enhance their ability to adapt to changing market conditions and improve overall performance. Additionally, it is essential for organizations to regularly assess and refine their corporate culture to ensure it aligns with their strategic goals and supports innovation. This includes soliciting feedback from employees and stakeholders to identify areas for improvement and implementing changes that foster a more dynamic and responsive organizational environment. Furthermore, as innovation practices play a partial mediating role, organizations should integrate these practices into their strategic planning processes. This involves setting clear objectives for innovation and ensuring that they are aligned with the broader goals of the organization. By doing so, commercial state corporations can create a synergistic effect where a strong corporate culture and effective innovation practices work together to enhance performance.

5.3.3 Recommendations on corporate culture, regulatory framework and performance

The study results indicating a generally positive perception of the regulatory framework in commercial state corporations in Kenya, it is recommended that organizations prioritize improvements in several key areas to enhance governance and operational efficiency. It is essential to reinforce adherence to Mwongozo, as it plays a critical role in strengthening boards and ensuring effective oversight. Additionally, further emphasis should be placed on enhancing accountability mechanisms, particularly the role of the Public Investment Committee, to maintain transparency and accountability in fiscal policies and expenditures. Moreover, organizations should prioritize the implementation of advanced technological solutions to modernize data collection processes, thereby improving accuracy and efficiency in performance monitoring. Addressing the challenges in obtaining reliable and timely data is crucial for effective policymaking; therefore, state corporations should invest in training and resources to enhance data management practices. There are also critical inefficiencies in the performance contracting process that need to be addressed, and streamlining this process by reducing bureaucratic layers and clarifying roles can lead to improved efficiency. Furthermore, the findings suggest a need for harmonizing the legal framework to establish a consistent legal foundation for oversight functions. By focusing on these recommendations, commercial state corporations can enhance the effectiveness of the regulatory framework, ensuring that it meets the needs of stakeholders and supports the overall goals of governance and accountability.

The study findings revealed that “the regulatory framework plays a moderating role in the relationship between corporate culture and the performance of commercial state corporations in

Kenya. It is recommended that organizations focus on strengthening their regulatory frameworks to enhance the positive impact of corporate culture on performance outcomes." Given the strong correlation observed when the interaction term between corporate culture and the regulatory framework is included, state corporations should prioritize the development and implementation of clear, consistent regulations that support and reinforce positive corporate culture. To achieve this, organizations should engage in regular reviews of their regulatory policies to ensure they align with best practices and facilitate effective governance. This includes fostering an environment where compliance with regulations is not only encouraged but also integrated into the corporate culture, thereby enhancing accountability and transparency. Additionally, training programs should be established to educate employees about the regulatory framework and its importance in supporting corporate culture and performance. By ensuring that all employees understand the regulatory expectations and how they relate to the organization's goals, corporations can create a more cohesive and motivated workforce. Furthermore, state corporations should actively involve stakeholders in discussions about regulatory improvements, ensuring that the framework is responsive to the needs of the organization and its employees. This collaborative approach can help identify potential barriers to performance and facilitate the development of solutions that enhance both corporate culture and regulatory compliance.

5.3.4 Recommendations on corporate culture, innovation practice and regulatory framework on performance.

The study findings indicated "a significant moderated mediation effect of the regulatory framework and innovation practices on the relationship between corporate culture and the performance of commercial state corporations in Kenya. It is therefore recommended that organizations prioritize establishing a supportive regulatory environment that promotes and facilitates innovation." Given that a less restrictive regulatory framework allows corporate culture to positively influence performance through innovation practices, state corporations should advocate for policies that promote flexibility and adaptability in regulations. To maximize the benefits of corporate culture and innovation practices, organizations should actively engage with policymakers to ensure that the regulatory framework is conducive to innovation. This could involve providing feedback on existing regulations and suggesting reforms that reduce bureaucratic barriers, thereby enabling a more dynamic and innovative organizational culture.

Additionally, organizations should invest in developing robust innovation practices that align with their corporate culture. This includes providing training and resources that empower employees to innovate and encouraging a culture of experimentation where new ideas can be tested and implemented without fear of failure. By fostering an environment that values creativity and innovation, state corporations can enhance their performance outcomes. Furthermore, it is essential for organizations to regularly assess the impact of their corporate culture and innovation practices on performance, particularly in relation to the regulatory framework. This can be achieved through performance metrics and feedback mechanisms that allow for continuous improvement and adaptation to changing regulatory conditions.

5.3.5 Recommendations for Practice

To enhance organizational performance, commercial state corporations in Kenya should prioritize cultivating a strong corporate culture that emphasizes collaboration, innovation, and a results-oriented approach. Specifically, management should implement structured programs and initiatives that promote teamwork, mutual trust, and opportunity-seeking behaviors. For example, fostering cross-departmental collaboration through team-building activities and innovation workshops can strengthen teamwork and creativity. Additionally, organizations should establish clear policies that ensure job security and recognize employee contributions, as these elements are critical for maintaining a positive perception of corporate culture. By embedding these practices into their operational frameworks, state corporations can create a supportive environment that drives effectiveness and achieves better outcomes.

Commercial state corporations in Kenya should integrate corporate culture development into their strategic planning and performance management processes. Specifically, organizations should focus on fostering shared values, enhancing employee engagement, and aligning cultural practices with organizational goals. This can be achieved by conducting regular cultural assessments to identify strengths and areas for improvement, followed by targeted interventions such as leadership training, team-building initiatives, and recognition programs that reinforce desired cultural behaviors. Additionally, embedding corporate culture metrics into performance evaluations would ensure that cultural alignment remains a priority. By institutionalizing these practices, state corporations can leverage the significant positive impact of corporate culture to drive improved performance outcomes.

Kenyan state corporations should integrate advanced digital tools and technologies to enhance performance monitoring and management processes. By adopting technology-driven solutions, such as real-time data tracking systems and automated performance contracting platforms, organizations can improve the reliability of data, streamline oversight mechanisms, and ensure more efficient decision-making. This approach did not only address existing challenges in data reliability and monitoring efficiency but also create a more adaptable and responsive regulatory environment. Ultimately, leveraging technology would enable these corporations to align their corporate culture with regulatory requirements more effectively, fostering innovation, accountability, and improved organizational performance.

Organizational leaders in Kenyan commercial state corporations should prioritize fostering a strong corporate culture that supports innovation while actively aligning innovation practices with the level of regulatory flexibility. Since the study shows that corporate culture has a stronger positive impact on performance in less restrictive regulatory environments, managers should focus on leveraging cultural strengths, such as shared values, collaboration, and adaptability, to drive innovation in ways that comply with existing regulations. Additionally, leaders should invest in training and capacity building to equip employees with skills to navigate regulatory complexities and identify innovative opportunities within the framework of oversight. By doing so, organizations can maximize their performance even in environments with varying degrees of regulatory constraints.

5.3.6 Recommendations on Policy

The Kenyan government should develop a comprehensive policy framework to support and incentivize innovation practices within state corporations. This framework could include measures such as dedicated funding for research and development, tax incentives for organizations that prioritize innovation, and the creation of innovation hubs to encourage collaboration and knowledge sharing. Additionally, “the policy should emphasize the importance of aligning innovation strategies with market needs, promoting the development of new products and services to drive sales growth and enhance competitiveness.” By institutionalizing these practices, the government can ensure that state corporations are better equipped to adapt to market demands and capitalize on emerging opportunities.

To maximize the mediating effect of innovation practices on corporate culture and performance, the government should require all state corporations to integrate innovation into their core governance structures. This could involve mandating the inclusion of innovation-focused key performance indicators (KPIs) in strategic plans and performance evaluations. Policies should also encourage organizations to foster a culture of creativity, collaboration, and adaptability through training programs, workshops, and leadership development initiatives. By embedding innovation practices into governance, the policy would ensure that state corporations consistently translate their cultural strengths into actionable strategies, resulting in improved efficiency, processes, and overall performance.

Policymakers should design regulatory frameworks that strike a balance between oversight and flexibility to foster innovation while maintaining accountability. The findings suggest that excessively stringent regulations weaken the positive impact of corporate culture on organizational performance through innovation practices. Therefore, policies should aim to create a supportive environment that encourages innovation by reducing unnecessary bureaucratic constraints, especially for commercial state corporations. This can be achieved by implementing periodic reviews of regulatory policies, ensuring that they adapt to changing business environments and facilitate organizational growth, performance, and sustainability.

5.3.7 Recommendations on Theory

This study's findings contribute to organizational theory by demonstrating the contingent nature of the corporate culture-performance relationship, specifically highlighting how the regulatory framework acts as a crucial contextual factor influencing the mediating role of innovation. Theoretically, this suggests that models of organizational performance should move beyond simple direct relationships between culture and performance and incorporate the dynamic interplay between internal organizational factors (like culture and innovation) and external environmental factors (like the regulatory framework) to more accurately explain performance outcomes, particularly within regulated industries.

The findings of this study highlight the need to integrate moderated mediation models into existing theoretical frameworks on organizational performance. Specifically, theories in organizational behavior and performance should incorporate the role of regulatory frameworks as both a moderator and a contextual factor that conditions the mediating influence of innovation practices. This integration would provide a more comprehensive understanding of how corporate culture interacts with innovation and regulatory environments to drive performance. By emphasizing the interplay between these variables, academic frameworks can better reflect the complexities of organizational dynamics in regulated industries, offering a more robust foundation for analyzing and predicting performance outcomes.

5.4 Enterprise of the Study

The enterprise of this study lies in its integrated conceptual framework that connects corporate culture, innovation practice, and regulatory framework in explaining organizational performance. While past studies often investigated these constructs in isolation, this study developed and tested a model that accounted for both mediating and moderating relationships. The model therefore advances theory by contextualizing organizational performance within Kenya's state corporations sector, while simultaneously offering practical value for managers and policymakers.

Methodologically, the study contributes by employing PROCESS macro modeling to disentangle mediation and moderation effects, an approach that enhances analytical rigor in organizational research. Empirically, the findings fill contextual gaps in the literature by providing evidence from Kenyan commercial state corporations, a sector often overlooked in global management research.

Like any empirical research, this study has limitations that must be acknowledged. First, the use of a cross-sectional design means that causal inferences between corporate culture, innovation practices, regulatory frameworks, and performance cannot be fully established. Second, the reliance on self-reported data through questionnaires may introduce biases such as social desirability or common method variance. Third, the study focused exclusively on commercial state corporations in Kenya, which may limit the generalizability of findings to other categories of state corporations or to different national contexts.

However, these limitations do not undermine the claim to new knowledge. Instead, they contextualize the scope of contribution. The study advances knowledge by integrating corporate culture, innovation practices, and regulatory frameworks into one conceptual and empirical model, filling a significant gap in the Kenyan and African public-sector literature where these constructs have largely been studied in isolation. By demonstrating the mediating role of innovation and the moderating effect of regulation in the culture–performance relationship, the study provides new theoretical insights and empirical evidence that extend existing frameworks such as Agency Theory, New Public Management, and the Denison Culture Model. Furthermore, while the findings are context-specific, they offer transferable lessons to other state-owned enterprises in similar governance and regulatory environments.

Thus, although the limitations may restrict the breadth of application and causal interpretation, the study still makes a substantial and original contribution by clarifying how culture, innovation, and regulation interact to shape organizational performance in commercial state corporations in Kenya.

5.5 Suggestions for Future Research

Future studies should delve into sectoral variations in the interaction between corporate culture, innovation practices, and regulatory frameworks to uncover the unique dynamics that shape organizational performance in different industries or regions. For instance, industries such as healthcare, or technology may exhibit distinct cultural and regulatory challenges that influence how innovation practices mediate performance outcomes. By examining these variations, researchers can identify context-specific factors—such as the degree of regulatory stringency, the pace of technological change, or the prevalence of collaborative versus hierarchical cultures—that affect the interplay between these variables. This approach would not only extend the applicability of existing findings but also contribute to a more granular theoretical framework that accounts for the diversity of organizational environments. Such research would advance organizational behavior theories by highlighting how sector-specific conditions shape the effectiveness of corporate culture and innovation practices under varying regulatory frameworks. Additionally, it would provide actionable insights for policymakers and organizational leaders, enabling them to design tailored strategies that optimize performance while addressing the unique demands of their respective industries.

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APPENDICES

Appendix I: Introduction Letter to Respondents

Eddah Chepkurui Cheruiyot,

The Management University of Africa,

Nairobi, Kenya.

Email:chepkuruiedd@yahoo.com

Dear Respondents,

<u>RE: DATA COLLECTION</u>

My name is Eddah Chepkurui Cheruiyot, a Doctoral Student at the Management University of Africa. I am conducting an academic research on**, Corporate Culture, Innovation practice, Regulatory Framework and Performance of Commercial State Corporations in Kenya.** This letter is to humbly request you to respond to the attached questionnaire. The study is purely for academic purposes and strict confidentiality will be adhered to.

Thank you in advance for your willingness and understanding to contribute to this research.

Yours Sincerely,

Eddah Chepkurui Cheruiyot

DML/17/00135/1/21

Appendix II: SURVEY QUESTIONNAIRE

Please read each question carefully and follow the instructions given. Kindly answer the questions by ticking in the box that best describes your answer in the spaces provided where applicable. The answers provided will be used for academic purpose only and will be treated confidentially.

PART A: General Information

1. Gender

   Male ( )

   Female ( )

2. What is your age?

   Less than 25 years ( )

   25-35 years ( )

   36-45 years ( )

   Over 45 years ( )

3. What is your highest level of education?

   Diploma ( )

   Bachelor Degree ( )

   Masters Degree ( )

   PhD ( )

5. Position in the organization

   Chief Executive Officer ( )

   Head of Finance/ Accounts ( )

   Head of Human Resource Management and Development ( )

   Head of Operation ( )

   Head of ICT ( )

   Head of Marketing ( )

6. Management Level

   Senior Management ( )

   Middle Manager ( )

   Lower Management ( )

PART B: CORPORATE CULTURE

Please indicate how your company handles the following aspects of Corporate Culture on a scale of 1 to 5, where; 1 = strongly disagree, 2=Disagree, 3= Neutral, 4=Agree, 5=Strongly Agree

No.	Involvement Culture statements	1	2	3	4	5
1.	Decisions are usually made at the level where the best information is available					
2.	Information is widely shared so that everyone can get the information he or she needs when it is needed.					
3.	Everyone believes that he or she can have a positive impact.					
4.	Working in this organisation is like being part of a team.					
5.	This organisation relies on horizontal control and coordination to get work done rather than hierarchy.					
6.	Teams are the primary building blocks of this organization.					
7.	The organization is constantly improving its 'bench strength' in many dimensions					
8.	This organisation continuously invests in the skill of employees.					
	Consistency Culture Statements	**1**	**2**	**3**	**4**	**5**
9.	The leaders and managers follow the guidelines that they set for the rest of the organisation.					
10.	There is a clear and consistent set of values in this organisation that governs the way we do business.					
11.	This organisation has an ethical code that guides our behaviour and tells us right from wrong					
12.	When disagreements occur, we work hard to achieve solutions that benefit both parties in the disagreement.					
13.	It is easy to reach consensus, even on difficult issues.					
14.	We often have trouble reaching agreement on key issues.					
15.	People from different organisational units still share a common					

	perspective					
16.	It is easy to coordinate projects across functional units in this organization					
	Adaptability Culture Statements	**1**	**2**	**3**	**4**	**5**
17.	This organisation is very responsive and changes easily					
18.	This organisation responds well to competitors and other changes in the business environment.					
19.	This organisation continually adopts new and improved ways to do work					
20.	Customer comments and recommendations often lead to changes in this organisation					
21.	Customer input directly influences our decisions.					
22.	We view failure as an opportunity for learning and improvement					
23.	This organisation encourages and rewards those who take risk.					
	Mission Culture Statements	**1**	**2**	**3**	**4**	**5**
24.	This organisation has long-term purpose and direction.					
25.	This organisation has a clear mission that gives meaning and direction to our work					
26.	This organisation has a clear strategy for the future					
27.	There is widespread agreement about goals of this organisation					
28.	Leaders of this organisation set goals that are ambitious but realistic.					
29.	The leadership has clearly stated the objectives we are trying to meet.					
30.	Leaders of this organisation have a long-term orientation.					

PART C: INNOVATION PRACTICE

Please indicate how your company handles the following aspects of Innovation practice on a scale of 1 to 5, where; 1 = strongly disagree, 2=Disagree, 3= Neutral, 4=Agree, 5=Strongly Agree

No	Process Innovation practice statements	1	2	3	4	5
1.	Our company has invested in process innovation practice					
2.	Process innovation practice decreases cost of operations in the organisation					
3.	Process innovation practice enhance quality of products and services provided by the organisation					
4.	Process innovation practice enhance business processing reengineering in the organisation					
5.	Process innovation practice enhance employee participation and commitment in the organisation					
6.	Process innovation practice enhance product innovation practice in the organisation					
7.	Process innovation practice enhance competitiveness of the organisation					
8.	Process innovation practice increase the market share of the organisation					

	Product Innovation practice Statements	**1**	**2**	**3**	**4**	**5**
9.	A firm that is constantly introducing new product offerings is more likely to achieve higher sales volumes					
10.	A business firm that frequently introduces new products is more likely to retain and attract more customers					
11.	Improved products positively and significantly influences the sales volumes					
12.	New product positively influences the organisation's profitability					
13.	Adoption of continuous improvement on the product offering is a sure way to increase a firm's profitability					
14.	Our organisation has invested in Product innovation practice					
	Market Innovation practice Statements	**1**	**2**	**3**	**4**	**5**
15.	Our organisation has invested in Market innovation practice					
16.	Market Innovation practice enhances customer needs in the organisation					
17.	Market Innovation practice leads to opening up new markets for the organisation					
18.	The use of technology lead to the development of new ways to market the organisation					
19.	Market innovation practice enhance competitiveness of the organisation					
20.	Market innovation practice plays a crucial role in fulfilling market needs in the organisation					
21.	Market innovation practice plays a crucial role in responding to market opportunities for the organisation					
	Organisation Innovation practice Statements	**1**	**2**	**3**	**4**	**5**
22.	Renewing the organization structure facilitate teamwork					
23.	Renewing the organization structure facilitate coordination between different functions such as manufacturing					
24.	Renewing the routines, procedures and processes employed to execute firm activities in innovative manner					
25.	Our firm undertakes organisation innovation practice					

PART D: REGULATORY FRAMEWORK

Please indicate how your company handles the following aspects of Regulatory Framework on a scale of 1 to 5, where; 1 = strongly disagree, 2=Disagree, 3= Neutral, 4=Agree, 5=Strongly Agree

No	Legal framework on institutional structure	1	2	3	4	5
1.	There is a clear and consistently applied classification among oversight institutions					
2.	There is a clear and consistently applied classification among departments for transparency					
3.	There is a clear and consistently applied classification for fiscal reporting					
4.	The legal framework is harmonized to provide for a consistent legal foundation for the exercise of oversight functions by other mandated government institutions					
5.	The legal framework is harmonized to provide for a consistent legal foundation for smooth relations with other mandated government institutions					
	Performance monitoring	**1**	**2**	**3**	**4**	**5**
6.	There exists key challenge in reliable and timely data to support sound policymaking					
7.	Data collection, quality and analysis challenges should be addressed through staffing and skills to increase the analytical capacity of National Treasury and the Inspectorate of State Corporations					
8.	Adoption of an IT-system to automate and systemize data collection to address the limitations of manual data collection and related challenges					
9.	Adoption of an IT-system in order to upgrade financial and fiscal risk monitoring and management and improve the reliability and timeliness of data.					
10.	There should be well define performance indicators with high precision to ensure that real performance is captured					
11.	There should be a well streamlined performance contracting processes by reducing reporting lines and agencies involved					
	Controls and transparency of operational performance	**1**	**2**	**3**	**4**	**5**
12.	Commercial State Corporations do not publish financial statements in a timely manner which negatively affects their accountability					
13.	Annual reports could be further enriched by including information on key issues covered in the performance contracts of commercial state corporations					
14.	Corporate governance information such as compliance with Mwongozo and a range of other topics should be included in the commercial state corporations Annual reports					
15.	Improve the quantification of fiscal risks and the comprehensiveness of analysis in the Statement of Specific Fiscal Risks in the annex of the annual budget policy statement					
16.	Public Investment Committee should review all key reports submitted to them to hold the government's executive branch to account for its SC-related fiscal and expenditure policies and					

	implementation					
17.	Compliance with Mwongozo, strengthens boards, ensure effective oversight and increases operational efficiency					

PART E: ORGANISATIONAL PERFORMANCE

Please indicate how your company handles the following aspects of Organisational Performance On a scale of 1 to 5, where; 1 = strongly disagree, 2=Disagree, 3= Neutral, 4=Agree, 5=Strongly Agree

	Statements	**1**	**2**	**3**	**4**	**5**
1.	The organisation's sales growth rate is high					
2.	The organisation profitability will increase					
3.	The organisation sales revenue will increase					
4.	The organisation's after-tax net income growth rate will be high					
5.	The organisation's return on investment is high					
6.	The organisation's employee productivity will be high					
7.	The organisation will have an increase in the market share					
8.	The number of customers is expected to increase					
9.	The organisation will have high Customer retention					
10.	The brand image of the organisation will improve					
11.	The organisation will have access to new markets					
12.	There is development of new products in the organisation					
13.	The organisation's attraction to professionals is high					
14.	The organisation's employee morale is high					
15.	There is better service delivery to customers in the organisation					
16.	The reputation of the organisation is recovering					
17.	The organisation's staff turnover is lower					
18.	Employees feel satisfied when innovative technologies are utilized in the discharge of their duties					

<u>THANK YOU FOR YOUR TIME AND PARTICIPATION</u>

Appendix III: Commercial State Corporations

	Commercial State Corporations
1	Agro-Chemicals and Food Company
2	Chemelil Sugar Company
3	East African Portland Cement Company
4	Gilgil Telecommunications Industries
5	Jomo Kenyatta Foundation
6	Kenya Airports Authority
7	Kenya Broadcasting Corporation
8	Kenya Electricity Generating Company
9	Kenya Literature Bureau
10	Kenya Pipeline Company
11	Kenya Ports Authority
12	Kenya Power and Lighting Company
13	Kenya Railways Corporation
14	Kenya Civil Aviation Authority
15	Kenya Safari Lodges and Hotels
16	Kenya Seed Company Limited
17	Kenya Wine Agencies
18	Kenyatta International Convention Center
19	National Cereals and Produce Board
20	National Housing Corporation
21	National Oil Corporation of Kenya
22	National Water Conservation and Pipeline Corporation
23	Numerical Machining Complex
24	Nzoia Sugar Company
25	Postal Corporation of Kenya
26	Pyrethrum Board of Kenya

27	School Equipment Production Unit
28	South Nyanza Sugar Company
29	Telkom Kenya Limited
30	University of Nairobi Enterprises and Services Limited
31	New Kenya Co-operative Creameries Ltd
32	Kenya Electricity Transmission Company

Source: Current Inventory of State Corporations Report of 2013

Appendix IV: FACTOR LOADING

Corporate Culture	
Item	**Component Factor Loading**
CC_INV_CULT_1_Decisions are usually made at the level where the best information is available	0.724
CC_INV_CULT_2_Information is widely shared so that everyone can get the information he or she needs when it is needed.	0.742
CC_INV_CULT_3_Everyone believes that he or she can have a positive impact.	0.719
CC_INV_CULT_4_Working in this organisation is like being part of a team.	0.786
CC_INV_CULT_5_This organisation relies on horizontal control and coordination to get work done rather than hierarchy.	0.702
CC_INV_CULT_6_Teams are the primary building blocks of this organization.	0.774
CC_INV_CULT_7_The organization is constantly improving its 'bench strength' in many dimensions	0.745
CC_INV_CULT_8_This organisation continuously invests in the skill of employees.	0.833
CC_CONS_CULT_9_The leaders and managers follow the guidelines that they set for the rest of the organisation.	0.812
CC_CONS_CULT_10_There is a clear and consistent set of values in this organisation that governs the way we do business.	0.826
CC_CONS_CULT_11_This organisation has an ethical code that guides our behaviour and tells us right from wrong	0.750
CC_CONS_CULT_12_When disagreements occur, we work hard to achieve solutions that benefit both parties in the disagreement.	0.746
CC_CONS_CULT_13_It is easy to reach consensus, even on difficult issues	0.724
CC_CONS_CULT_14_We often have trouble reaching agreement on key issues.	0.842
CC_CONS_CULT_15_People from different organisational units still share a common perspective	0.719
CC_CONS_CULT_16_It is easy to coordinate projects across functional units in this organization	0.886
CC_AD_CULT_17_This organisation is very responsive and changes easily	0.702
CC_AD_CULT_18_This organisation responds well to competitors and other changes in the business environment.	0.774

CC_AD_CULT_19_This organisation continually adopts new and improved ways to do work	0.745
CC_AD_CULT_20_Customer comments and recommendations often lead to changes in this organisation	0.833
CC_AD_CULT_21_Customer input directly influences our decisions.	0.812
CC_AD_CULT_22_We view failure as an opportunity for learning and improvement	0.826
CC_AD_CULT_23_This organisation encourages and rewards those who take risk.	0.750
CC_MISN_CULT_24_This organisation has long-term purpose and direction.	0.746

Innovation practice	
Item	**Component Factor Loading**
INV_PR_MKTINN_22_Market innovation practice plays a crucial role in fulfilling market needs in the organisation	0.818
INV_PR_PRDTINN_10_A firm that is constantly introducing new product offerings is more likely to achieve higher sales volumes	0.818
INV_PR_MKTINN_21_Market innovation practice enhance competitiveness of the organisation	0.848
INV_PR_PRCINN_9_Process innovation practice enhance customer loyalty to the organisation	0.848
INV_PR_MKTINN_20_The use of technology lead to the development of new ways to market the organisation	0.89
INV_PR_PRCINN_8_Process innovation practice increase the market share of the organisation	0.89
INV_PR_MKTINN_18_Market Innovation practice enhances customer needs in the organisation	0.9
INV_PR_PRCINN_6_Process innovation practice enhance product innovation practice in the organisation	0.9
INV_PR_PRDTINN_13_New product positively influences the organisation's profitability	0.829
INV_PR_PRCINN_1_Our company has invested in process innovation practice	0.829
INV_PR_PRDTINN_16_Our organisation has invested in Product innovation practice	0.868
INV_PR_PRCINN_4_Process innovation practice enhance business processing reengineering in the organisation	0.868
INV_PR_MKTINN_17_Our organisation has invested in Market innovation practice	0.855
INV_PR_PRCINN_5_Process innovation practice enhance employee participation and commitment in the organisation	0.855

INV_PR_PRDTINN_14_Firms that consistently seek to offer improved products are more likely to attract new customers as well as retain the existing ones	0.811
INV_PR_PRCINN_2_Process innovation practice decreases cost of operations in the organisation	0.811
INV_PR_PRDTINN_15_Adoption of continuous improvement on the product offering is a sure way to increase a firm's profitability	0.814
INV_PR_PRCINN_3_Process innovation practice enhance quality of products and services provided by the organisation	0.814
INV_PR_MKTINN_19_Market Innovation practice leads to opening up new markets for the organisation	0.851
INV_PR_PRCINN_7_Process innovation practice enhance competitiveness of the organisation	0.851
INV_PR_MKTINN_24_Market innovation practice enhance survival for organisation in an environment of fasting changing market	0.913
INV_PR_PRDTINN_12_Improved products positively and significantly influences the sales volumes	0.913
INV_PR_MKTINN_23_Market innovation practice plays a crucial role in responding to market opportunities for the organisation	0.982
INV_PR_PRDTINN_11_A business firm that frequently introduces new products is more likely to retain and attract more customers	0.982
Regulatory Framework	
Item	**Component Factor Loading**
REG_FRM_LGL_FRM_1_There is lack of a clear and consistently applied classification among oversight institutions which hampers oversight	0.799
REG_FRM_LGL_FRM_2_There is lack of a clear and consistently applied classification among departments which impedes transparency	0.815
REG_FRM_LGL_FRM_3_There is lack of a clear and consistently applied classification in reports which complicates fiscal reporting	0.720
REG_FRM_LGL_FRM_4_Harmonize the legal framework to provide for a consistent legal foundation for the exercise of oversight functions and its relations with commercial state corporations oversight functions by other mandated government institution	0.827
REG_FRM_PRM_MON_5_There exists key challenge in reliable and timely data to support sound policymaking	0.839

REG_FRM_PRM_MON_6_Data collection, quality and analysis challenges should be addressed through staffing and skills to increase the analytical capacity of National Treasury and the Inspectorate of State Corporations	0.868
REG_FRM_PRM_MON_7_Adoption of an IT-system to automate and systemize data collection to address the limitations of manual data collection and related challenges	0.813
REG_FRM_PRM_MON_8_Adoption of an IT-system in order to upgrade financial and fiscal risk monitoring and management and improve the reliability and timeliness of data.	0.701
REG_FRM_PRM_MON_10_There should be a well streamlined performance contracting processes by reducing reporting lines and agencies involved	0.703
REG_FRM_CONT_TRANS_14_Improve the quantification of fiscal risks and the comprehensiveness of analysis in the Statement of Specific Fiscal Risks in the annex of the annual budget policy statement	0.777
REG_FRM_CONT_TRANS_15_Public Investment Committee should review all key reports submitted to them to hold the government's executive branch to account for its SC-related fiscal and expenditure policies and implementation	0.808
REG_FRM_CONT_TRANS_16_Compliance with Mwongozo, strengthens boards, ensure effective oversight and increases operational efficiency	0.758
Organisational Performance	
Item	**Component Factor Loading**
ORG_PERF_FIN_1_The organisation's sales growth rate will be higher than that of the competitors	0.739
ORG_PERF_FIN_2_The organisation profitability will increase over the next five years	0.747
ORG_PERF_FIN_3_The organisation sales revenue will increase over the years	0.725
ORG_PERF_FIN_4_The organisation's after-tax net income growth rate will be higher than that of the competitors	0.732
ORG_PERF_FIN_5-The organisation's return on investment is higher than that of the competitors	0.737
ORG_PERF_FIN_6-The organisation's employee productivity will be higher than that of the competitors	0.764
ORG_PERF_BUS_7_The organisation will have an	0.773

increase in the market share	
ORG_PERF_BUS_8_The customers are expected to increase over the coming years	0.738
ORG_PERF_BUS_9_The brand image of the organisation will improve	0.726
ORG_PERF_BUS_10_The organisation will have access to new markets	0.753
ORG_PERF_BUS_11_There will be development of new products in the organisation	0.698
ORG_PERF_BUS_12_The organisation’s attraction to professionals was higher than that of the competitors	0.745
ORG_PERF_BUS_13_The organisation’s employee morale is higher than that of the competitors	0.760
ORG_PERF_ORG_14_The organisation will have efficiency in operations	0.794
ORG_PERF_ORG_15-There will be better service delivery in the organisation	0.721
ORG_PERF_ORG_16_The reputation of the organisation will recover	0.633
ORG_PERF_ORG_17_The organisation's staff turnover is lower than that of the competitors	0.657
ORG_PERF_ORG_18_The organisation's market share is higher than that of the competitors	0.598

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Appendix V: Moderated mediation Analysis

Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 3.3 ******************

Written by Andrew F. Hayes, Ph.D.   www.afhayes.com
Documentation available in Hayes (2018). www.guilford.com/p/hayes3

****
Model : 8
Y : Performance
X : Innovation practice
M : Corporate Culture
W : Regulatory Framework

Sample
Size: 179

****
OUTCOME VARIABLE:
Corporate Culture

Model Summary

R	R-sq	MSE	F	df1	df2	p
.7503	.5630	.1929	75.1429	3.0000	175.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	-.3254	.6427	-.5063	.6133	-1.5938	.9430
Innovation practice	.8722	.2281	3.8238	.0002	.4220	1.3223
Regulatory Framework	.2244	.0533	4.2121	.0000	.1193	.3295
Int_1	-.0404	.0121	-3.3374	.0010	-.0644	-.0165

Product terms key:
Int_1   :   Innovation practice x   Regulatory Framework

Covariance matrix of regression parameter estimates:

	constant	Innovation practice	Regulatory Framework	Int_1
constant	.4130	-.1336	-.0203	.0067
Innovation practice	-.1336	.0520	.0029	-.0018
Regulatory Framework	-.0203	.0029	.0028	-.0006
Int_1	.0067	-.0018	-.0006	.0001

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0278	11.1380	1.0000	175.0000	.0010

Focal predict: Innovation practice (X)
Mod var: Regulatory Framework (W)

Conditional effects of the focal predictor at values of the moderator(s):

Regulatory Framework	Effect	se	t	p	LLCI	ULCI
10.1931	.4599	.1773	2.5944	.0103	.1101	.8098
15.8889	.2296	.1822	1.2598	.2094	-.1301	.5892
19.5000	.0835	.1982	.4215	.6739	-.3076	.4746

****
OUTCOME VARIABLE:
Performance

Model Summary

R	R-sq	MSE	F	df1	df2	p
.8201	.6725	.1385	89.3387	4.0000	174.0000	.0000

Model

	coeff	se	t	p	LLCI	ULCI
constant	1.1958	.5450	2.1941	.0295	.1201	2.2715
Innovation practice	-.0189	.2012	-.0940	.9252	-.4160	.3782
Corporate Culture	.4989	.0641	7.7891	.0000	.3725	.6254
Regulatory Framework	.0318	.0474	.6719	.5026	-.0617	.1253
Int_1	.0053	.0106	.4959	.6206	-.0157	.0262

Product terms key:
Int_1 : Innovation practice x Regulatory Framework

Covariance matrix of regression parameter estimates:

	constant	Innovation practice	Corporate Culture	Regulatory Framework	Int_1
constant	.2970	-.0971	.0013	-.0149	.0049
Innovation practice	-.0971	.0405	-.0036	.0029	-.0014
Corporate Culture	.0013	-.0036	.0041	-.0009	.0002
Regulatory Framework	-.0149	.0029	-.0009	.0022	-.0005
Int_1	.0049	-.0014	.0002	-.0005	.0001

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.0005	.2460	1.0000	174.0000	.6206

****************** DIRECT AND INDIRECT EFFECTS OF X ON Y *****************

Conditional direct effect(s) of X on Y:

Regulatory Framework	Effect	se	t	p	LLCI	ULCI
10.1931	.0346	.1531	.2261	.8214	-.2675	.3368
15.8889	.0645	.1551	.4160	.6779	-.2416	.3707
19.5000	.0835	.1680	.4970	.6198	-.2481	.4151

Conditional indirect effects of X on Y:

INDIRECT EFFECT:
Innovation practice -> Corporate Culture -> Performance

Regulatory Framework	Effect	BootSE	BootLLCI	BootULCI
10.1931	.2295	.1508	-.0821	.5125
15.8889	.1145	.1398	-.1722	.3808
19.5000	.0417	.1376	-.2384	.3059

Index of moderated mediation:

	Index	BootSE	BootLLCI	BootULCI
Regulatory Framework	-.0202	.0065	-.0333	-.0077

********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
5000

W values in conditional tables are the 16th, 50th, and 84th percentiles.

NOTE: Variables names longer than eight characters can produce incorrect output.
Shorter variable names are recommended.

------ END MATRIX -----