ORGANIZATIONAL RESOURCES AND PERFORMANCE OF PUBLIC UNIVERSITIES IN WESTERN REGION, KENYA.

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A Thesis submitted to the School of Business and Economics in partial fulfillment for the requirements for the award of the Degree of Master of Business Administration in Strategic Management of Masinde Muliro University of Science and Technology.

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DEDICATION

This Thesis is dedicated to my dear wife Janet Mukhwana and children; Hodaviah Ingosi and Hellen Adisa for maximum support and encouragement accorded in my study endeavors

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ABSTRACT

The education sector in Kenya is currently characterized by a dynamic and highly competitive operational structure, as a result of the proliferation of universities. Revenue generation has been reported to be low as a result of the decrease in private student sponsorship. Inefficiencies have resulted, and university staff have been expressing dissatisfaction with their compensation. The purpose of the study was to establish the influence of organizational resources on performance of Public Universities in Western Region, Kenya. Specifically to determine the influence of financial resources, human resources, technological resources and intellectual property on performance of Public Universities in Western Region, Kenya and to determine the moderating influence of organization culture on the relationship between organizational resources and performance of Public Universities in Western Region, Kenya. The study adopted descriptive and correlational research design. Targeted university departments in-charge of resources thus finance, procurement, Internal auditors, accountants, human resource and ICT giving 160 respondents of which sample size was 114 respondents. Stratified and simple random sampling technique was used. Closed ended questionnaires were adopted. Pilot study was conducted in University of Eldoret. The researcher attained at 0.7 threshold. Validity was measured using content and construct validity. Both descriptive and inferential were used. Organizational resources were of significant effect on performance of Public Universities thus Financial resources (B=0.371, p=0.006). Human resources (B=0.789, p= 0.000). Technological resources (B=0.835, p= 0.000) and intellectual property (B=1.459, p=0.000). Organization culture had a significant moderating effect. The study recommends timely and adequate disbursement of funds from the government. Furthermore accessibility of funds should be sought by universities at all costs to enable performance in respective universities. The study recommends that public universities should always employ competent staff for effective productivity. Universities should advocate for innovations and even encourage research and development initiatives. The study recommends provision of adequate information technology gadgets for use. Universities should can invest in publications. The university can further initiate new innovative processes copyright trends. The study advocates that public universities should have a mission culture based on resources maximization that would see universities input increased. The study is expected to help the government, university management, students and scholars at large in decision-making and policy formulation.

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ABBREVIATIONS AND ACRONYMS

CUE	Commission of University Education
DOI	Digital Object Identify
DTS	Deposit Taking SACCOs
GHRM	Green Human Resource Management
IC	Integrated Circuit
JAB	Joint Admissions Board
KAM	Kenya Association of Manufacturers
KUCCPS	Kenya Universities and Colleges Central Placement Services
NSE	Nairobi Securities Exchange
RBV	Resource Based View
SACCO	Savings and Credit Cooperative Organization
SHRMP	Strategic Human Resource Management Practices
SME	Small and Medium-sized Enterprises
UoN	University of Nairobi
URAP	University Ranking by Academic Performance

USA United States of America

OPERATIONAL DEFINITION OF TERMS

Financial Resources	This refers to all monetary funds of the organization which forms firms' assets. This study examined financial resources on basis of disbursement and accessibility of funds.
Human Resources	This refers to workers thus people who make up the personnel of an organization. This study examined human resources through a number of measures such as staff competence, staff sufficiency, staff experience, staff dedication and staff learning capacity.
Intellectual Property	This refers to unique skill owned by an individual or a firm that makes performance easily achieved such as copyright. This study examined intellectual property through innovativeness, number of new patents, number of new procedures and number of research publications.
Organizational Resources	This refers to elements of financial resources, human resources, technological resources and intellectual property that determines performance of a firm.
Organization culture	This refers to the set of norms and expectations that employees are expected to follow in a given workplace. The importance people assign to various traits, such as a willingness to take risks and a keen eye for detail, shapes an organization's culture.

Examined through mission, adaptability, involvement and consistency.

Performance	This refers to goal realization of a firm through quality improvement and productivity. This paper examines performance through grant revenue, student enrolment, institution rating and employee satisfaction.
Technological Resources	This refers to use of computers and internet to facilitate, improve and fasten operations that could however be achieved manually. This study measured technological resources through staff IT compliance, technical innovations, technology availability, technology adequacy, technology effectiveness, research and development.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Universities are facing resource inadequacies in the current decade (Hsieh, 2020). Organizational resources for this study articulates financial based resources, human based resources, technological based resources and intellectual property that determine performance of a firm.

Government disbursements to cater for institutional operations. Universities of the 21st century face resource based challenges yet they must perform in a fierce global competition (Hadad, 2017). The ranking systems of the world universities generate new pressures for performance and offering best undergraduate and graduate study programs. Thus there is need to employ strategies to attain great performance for universities. At the same time, universities face a strong competition for intellectual and financial resources. They have to adapt their vision and mission to the new requirements for knowledge generation and innovation, and transferring intellectual property toward society (Dima, 2014). Successful universities, which are world-class universities (Bejinaru & Prelipcean, 2017) made great transformations in becoming learning organizations by developing strategies in environmental dynamic capabilities (Teece, 2019).

Equally human resources in terms of university employee's efficiency lead to success and performance. Nel, Plessis, Fazey, Erwee, Pillay, Mackinnon, and Millet (2015) investigated business performance of Australian firms on basis of information based technology resources where human based resources had a strong influence on business efficiency. Elbanna and Abdel-Maksoud, (2019) study on oil producing companies about firm efficiency based of firm resources. In the view of Duff, (2016), organizational resources are the building blocks that have an effect on organizational competitive advantage that is HR, financial resources, physical and intangible resources such as knowhow, patents and relationships. Albrecht, Breidahl and Marty (2018) conducted a study in Australia which confirmed that organizational resources such as organizational autonomy, human resource practices, strategic alignment and clear organizational goals have an effect on positive engagement.

Odack, (2015) conducted research on organizational resource determinants and long-term competitive advantage in higher education institutions. This research was conducted at United States International University. Results were that the reputation of a firm services/products, as a component of its resources, was the sole cause of the differences in performance.

Intellectual property is achieved through publications and ventures that markets the institutions all through. Private and governmental institutions in the East African region have implemented more collaborative agreements with international universities to ensure sufficient resources for student and staff exchanges (Ogachi, 2019). Notwithstanding the presence of international institutions and the availability of programs offered. Thus, the benefit of human and financial resources consistently favors industrialized nations. Historical issues faced by Kenyan colleges have encompassed insufficient financial resources, human resources, and technology resources (Kamau, 2023).

Technological resources are a basis for successful organization and therefore it is of priority in public universities. Basically technology improves performance by guaranteeing efficiency. The emergence of technology-based online and blended learning methods has presented both fresh prospects and challenges for worldwide implementation. The use of online education and digitalization presents academics with various prospects, but it necessitates the requisite infrastructure and preparedness. Specific rural regions suffer from inadequate or unreliable internet connectivity, and a significant number of students lack the financial means to acquire a device or pay associated data fees for Internet connectivity. Amidst the epidemic, institutions, staff, and students had to bear extra expenses to shift to online education as research projects were temporarily suspended. Students expressed significant apprehension about their academic prospects (Sonn, Plessis, Vuuren, Marais, Wagener & Roman, 2021). Numerous instructors, lacking prior expertise in delivering online education, had to rapidly acquaint themselves with various platforms to guarantee the uninterrupted provision of online education. Not many scientists possessed electronic gadgets enough Internet connectivity in their households.

Universities reports internationally note that Africa had the highest campus universities under closure during covid. According to Sonn et al. (2021), the rate of rapid adaptation to online education in Africa was just 29 percent, although in Europe it was 85%, USA it was 72% and Asia was 60 percent. The COVID-19 pandemic amplified educational disparities, as certain institutions made preparations to transition to online education and resume classes, while others faced severe limitations due to limited technology access and unfavorable socioeconomic circumstances among students (Plessis, Vuuren, Simons, Frantz, Roman, & Andipatin, 2022).

According to Mwangi and Waithaka (2018), the level of instruction at universities in Kenya has increased in tandem with the expansion of the universities. Principal stakeholders in the education industry are highly motivated to strategically position themselves in order to expand their market share. As to the Assessment by the Auditor General (2022), a total of 11 publicly owned universities were identified as having significant liquidity difficulties due to their restricted organizational resources. The declining enrollment of students at public universities after the implementation of education sector reforms has not improved the issue. The Higher Education Loans Board in Kenya is currently facing a significant burden since it is entrusted with the task of managing resources for learners (Baini & Mwasiaji, 2018). The issues faced by universities in Kenya, as identified by Njiru, (2018), include heightened rivalry from both local and international institutions of higher education, as well as the rising expense of education.

1.1.1 Organization culture

The norms and expectations that employees are expected to follow in a given workplace. The importance people assign to various traits, such as a willingness to take risks and a keen eye for detail, shapes an organization's culture. Njiru (2018), concluded that organization culture elements such as mission trait and involvement trait were significant predictors of performance unlike adaptability and consistency traits. Studies in Kenya further confirmed that organization culture has an impact on employee performance, strategy implementation, organizational performance, competitiveness, service delivery (Ogachi, 2019). A culture that values creativity, experimentation, and learning encourages employees to innovate and adapt their approaches to performance. Instances of strikes owing to delayed salaries and remittances' of statutory deductions among public universities informs culture.

A strong Organization Culture promotes collaboration and coordination among employees and departments, enhancing service delivery. When there is a culture of open communication, teamwork, and mutual support, organizations can better coordinate efforts, share knowledge, and provide seamless services to customers (Kimuyu, 2023). Leadership styles significantly influence Organization Culture. Transformational leaders who inspire and motivate employees, promote a culture of innovation and collaboration, and focus on customer needs, are more likely to create a positive Organization Culture conducive to excellent performance (Baini & Mwasiaji, 2018).

1.1.2 Performance of Public Universities

Universities are institutions of higher learning and research that, in accordance with their governing statutes, offer degrees at the bachelor's, master's, doctoral, diploma, and certificate levels in a wide range of disciplines. A university offers both higher academic and post-secondary education. Public Universities in Kenya were enacted by the Parliament act to partake research by utilizing their diverse highly skilled personnel in many fields. The primary purpose of research, outreach and extension constituted the basis on which research goals were set and measures by which fulfillment of these goals were established (KUCCPS, 2018).

The higher educational sector in Kenya is one of the most vibrant sectors in the education industry and one that has seen tremendous changes in the last decade.

University education in Kenya dates back to the 1960s. In the year 1963, upon independence the then Royal College was renamed the University college of Nairobi (Ngome, 2006). The liberalization through the enactment of the commission for Higher education saw the dynamics in the higher education sector change significantly ushering in new competitors in the form of private universities, further, the Universities Act of 2012 and the rapidly increasing demand for university education and has transformed the sector increasing competition among players. There has been tremendous increase in the establishment of new universities in the period 2012 to 2015. The entry of these many universities has shifted the dynamics in the education sector radically by increasing rivalry among universities.

Annually, more than 60,000 students meet the eligible criteria for admittance. Nevertheless, these figures are distributed among the several universities. Under the Universities Act 2012 KUCCPS replaced JAB.While the remaining individuals who have the financial means to cover the costs of private and parallel courses are recruited by the diverse range of universities. Accordingly, universities engage in fierce competition (Kamau, 2023). Furthermore, according to Wainaina (2014), all colleges encounter a multitude of problems. As of 2023, five universities in Kenya were ranked in the top 2,500 institutions of higher education worldwide (Kimuyu, 2023). This is a marginal enhancement compared to the performance of institutions included in the University Ranking by Academic Performance (URAP) for the 2022-2023 term. With a global ranking of 1,317 and an African ranking of 39, the University of Nairobi (UoN) is the top-ranked university in Kenya. Public universities may encounter factors such as insufficient financial resources, inadequate facilities, challenges in upholding quality standards, societal expectations, student dissatisfaction, and strikes by lecturers that result in extended closures. Consequently, these institutions may experience reduced public trust and intense rivalry.

1.2 Statement of the problem

The present operating structure for Kenyan education industry is characterized by its dynamism and intense competitiveness, facilitated by the proliferation of numerous universities. The privatisation of university education and the implementation of a linear student selection process have significantly altered the operational landscape of public universities. Reports indicate that the decrease in private student sponsorship has resulted in reduced revenue generation due to a reduced number of students (CUE, 2018). For instance, in 2016, CUE mandated the shutdown of 10 out of the 13 sate light campuses for Kisii university. These actions are the culmination of concerted efforts by regulatory authorities to recalibrate university growth, from an array of low-quality, demand-absorbing campuses back to a traditional system of specialized, high quality campuses (Munene, 2016). Public universities in Kenya have been on the rise yet performance has been cited as a major challenge. Akoyo, Bula, and Wambua (2022) found that Kenyan universities have shown relatively low performance output in the last ten years compared to other institutions in the region and internationally. Only a small number of universities have achieved high positions in the regional rankings.

Strategic management of organizational resources. However, they were done in different countries such as in Hungary (Filser, Eggers, Kraus & Málovics, 2018), Malaysia (Ahmed & Othman, 2017), Nigeria (Asikhia, Oduyoye, Nanle, & Akinlabi, 2022), Brazil (Camfield, Giacomello & Sellitto 2018), UAE (Elbanna & Abdel- Maksoud, 2019). The studies were also done in different sectors such as health institutions (Njagi & Muchemi, 2018), Small Medium Enterprises (Filser, Eggers, Kraus & Málovics, 2018) Banking sector (Ahmed & Othman, 2017) state corporations (Ongeti & Machuki, 2018). Further the studies focused on direct effect on organizational resources on performance (Ongeti, 2018; Ahmed, 2017; Njoroge, 2015; Zoogah, 2015) as well as different effects of organizational resources on performance (Camfield, Giacomello & Sellitto, 2018). However this study focused on organizational resources on performance of Public Universities in Western Region, Kenya with a moderating effect of Organization Culture.

1.3 Objectives of the Study

1.3.1 General Objective

The main objective of the study established the influence of organizational resources on performance of Public Universities in Western Region, Kenya.

1.3.2 Specific Objectives

i) To determine the influence of financial resources on performance of Public Universities in Western Region, Kenya.

ii) To examine the influence of human resources on performance of Public Universities in Western Region, Kenya.

iii) To ascertain the influence of technological resources on performance of Public Universities in Western Region, Kenya.

iv) To assess the influence of intellectual property on performance of Public Universities in Western Region, Kenya.

v) To establish organization culture moderation on the relationship between organizational resources and performance of Public Universities in Western Region, Kenya.

1.4 Research Hypotheses

i) Financial resources have no significant influence on performance of Public Universities in Western Region, Kenya.

ii) Human resources have no significant influence on performance of Public Universities in Western Region, Kenya.

iii) Technological resources have no significant influence on performance of Public Universities in Western Region, Kenya.

iv) Intellectual Property has no significant influence on performance of Public Universities in Western Region, Kenya.

v) Organization Culture has no moderating significant influence on the relationship between organizational resources and performance of Public Universities in Western Region, Kenya.

1.5 Significance of the Study

It is expected that the findings of this study would help the government, university management, students and scholars at large.

Public universities: Universities being one of the largest sectors that contributes to education empowerment may benefit through the study in informing organizational resources that could enhance performance. Moreover, public universities will be able ensure adequate allocation of resources to enhance performance. The conclusions drawn from this study are anticipated to offer valuable insights to various stakeholders, particularly policymakers.

Government: The government may find the study relevant for policy making on resource allocation. The findings of the research may empower the government to foster planning for resource management for university education. Government will be able to get insights on which resources are more important to public universities. This would likely be of importance in supporting better learning within the universities.

Researchers: Academia stands to benefit significantly. The integration of results into curriculum development for educational institutions in Kenya and beyond has the potential to enrich the academic landscape, providing students with up-to-date knowledge and insights into organizational resources within public universities. The study may be of value for prospective scholars interested in examining organizational resources that affect organizational performance. In it will be of value to lay foundation on empirical and theoretical concepts.

1.6 Scope of the Study

The study focused on selected Public universities in Western Region, Kenya. The study thus focused on MMUST in Kakamega, Kibabii University in Bungoma, JOUST in Siaya and Maseno University in Kisumu. The study was projected to last between May 2024 and July 2024. University departments were targeted based on resources thus finance, accounting, procurement, HR and ICT. The study examined organizational resources thus financial resources, human and technological resources and intellectual property. This was moderated by Organization Culture.

1.7 Limitations of the Study

The research concentrated on public universities for Kenyan Western Region; hence the findings of the research were not entirely replicable to those universities found in the rest of the country. This study was susceptible to potential non-response among participants who hesitated to complete the questionnaire. This reluctance was attributed to the sensitive nature of the information being solicited, leading respondents to fear potential repercussions or simply struggling to grasp the questionnaire's content due to their diverse areas of expertise. Consequently, this limitation may result in a diminished sample size. To address this challenge, the researcher accompanied the questionnaire with a detailed introductory letter elucidating the research's purpose and emphasizing the utmost confidentiality of the responses. Additionally, the questionnaire was meticulously structured to ensure clarity and comprehensibility for all respondents, thus minimizing the likelihood of misinterpretation (Dillman, Smyth, & Christian, 2014).

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Presents a summary and a critique of the scholarly works around the study objectives. In addition, the chapter examines various theories that explain the organizational resources and performance. It also presents a critique of the theories and a conceptual model.

2.2 Theoretical Review

The study was guided by resource based view, organizational learning theory, diffusion of innovation theory and Denison culture model.

2.2.1 Resource Based View

It is the main theory of this study. Proposed by Wernefelt (1984). The approach posits that the performance of a corporation is enhanced by its resources. The philosophy of resource-based management emphasizes the resources and capabilities of an organization. Resources encompass the various inputs directed towards the production process of a corporation. This process is further elucidated by considering equipment, capital, and personnel. The idea posits that a company begins by examining its resources and thereafter evaluating the capacity to create value by implementing an appropriate plan to achieve maximum revenue in a sustainable manner. Effective utilization of organizational resources depends on the efficiency of the organization.

Organizational resources can be classified into two categories: tangibility and intangibility resources. Tangible resources refer to the resources that are immediately accessible to the organization, but are not accessible to external clients. Physical resources are susceptible to harm caused by human activities or natural events. In contrast, intangible resources refer to non-physical assets that indicate the future value of the company and are considered to be more significant than tangible capital.

Organisational intangible resources encompass copyrights, patents, franchisees, and trademarks. Such resources improve the performance. For organizations to attain growth, the resources of the firm must possess the qualities of value, rarity, difficulty of imitation, and exploitation by the organization (Wilburn, 2011). Two fundamental assumptions of the resource-based theory are organizational resources heterogeneity, which refers to the systematic variation in the resources controlled by firms in an industry. Distinctive characteristics of an organization ultimately lead to improved performance. An organization endowed with few resources makes the deliberate decision to embrace novel technology in order to enhance the difficulty of replicating their resources. The research was guided by the theory, which is the primary theory explaining how financial, human, technological, and intellectual property resources are employed to influence the organizational performance of public institutions. The dynamic environment additionally serves to generate a resource advantage for the organization. The implementation of technology allows for the distinction of products and services, so allowing a business to expand its customer base and satisfy the unfulfilled demands of its existing customers. Barney (2001) argues that the implementation of technologies, especially new ones, enables a company to leverage to enhance consumer value. The organizational resources encompass financial, human, technological, and intellectual contributions into the manufacturing process.

The significance of the theory lies in its ability to illustrate how public institutions optimize their resources for the goal of achieving desired outcomes. The resource-based viewpoint (RBV) is a management paradigm often employed by public institutions to evaluate the resources available for enhancing their performance. This may be integrated with Organisational Culture in an effort to identify resources with the capacity to provide exceptional outcomes.

2.2.2 Organizational Learning Theory

Schon and Argyris (1996) were behind formation of this theory. Deals with knowledge addition concepts. Through learning theory technology is learned and accepted for firm growth. It is still upon learning theory that individuals are able to diverse and tap intellectual property resources. Furthermore Organization Culture of the university can set training ground for resource management purposes. The theory however assumes that learning leads to definite growth not stating that the technology adopted or human training conducted may not bear fruits. This therefore sets concerns for effective approach towards human resources and as well as technological resources of a firm.

The notion of learning from errors is a fundamental concept in the philosophy of organizational learning. The notion was conceptualised by Schon and Argyris (1996), who proposed that learning occurs by the identification and correction of errors. To effectively learn from experiences, the organization must intentionally choose to modify its behaviour in response to changes in circumstances, intentionally connect actions with their outcomes, and retain the resulting data. Organisational learning is the process by which a company can educate and guide its people to adjust their goals and behaviour in order to achieve peak performance. Organizational learning theory was applied in this work to facilitate the management of human and technological resources.

2.2.3 Diffusion of Innovation Theory

Came in place by Rogers in 1995. The author provides a definition of diffusion as the systematic transmission of an innovation through specific channels over a period of time among the individuals within a social group. DOI states that the rate of diffusion is influenced by multiple factors such as complexity. Relative advantage, as defined by Rogers (1995), as the extent of perceived superior to its predecessor. Relevant to universities is the diffusion theory as it elucidates the rationale behind their use of technology resources. University adoption of technical advancements is motivated by the desire to improve performance. Consequently, colleges that embrace technological advancements exhibit comparatively superior performance compared to those that do not. Nevertheless, the argument is flawed in that technology has conspicuous limitations, such as the need for expertise in running the equipment and the susceptibility of computers to cyber threats. Therefore, institutions should only embrace technology when the benefits surpass the difficulties. The hypothesis is relevant since the study investigates the impact of the IT resource component on the university's performance. Within the present context, the theory is relevant and can be applied in this study. The implementation of these technological platforms is crucial for enhanced performance of universities.

2.2.4 Denison Culture Model

The pioneering of this concept was undertaken by Denison in 1990. The Denison culture model offers an examination of the cultural dynamics within a business and their impact on the professional performance of the employees. The concept posits that Organization Culture can be characterized by the attributes of mission, adaptability, involvement, and consistency.

Critique of the Denison culture model is based on the argument that excessive dependence on consensus, which involves soliciting input and participation from everyone, can result in decision-making procedures that are sluggish and burdensome, therefore impeding agility (Ngui, 2019). One potential consequence of excessive emphasis on involvement is the absence of clear leadership and vision, which can result in confusion and indecisiveness inside the business. The organization's high focus on consistency may impede its ability to adjust to new conditions or execute innovative ideas. An excessive focus on uniformity can lead to bureaucratic modalities and protocols, which can impede innovation and adaptability (Ruga, Kiruja & Sagwa, 2022). Moreover, although adaptation is crucial, an excessive focus on change can generate an unstable work dynamic, resulting in ambiguity and unease among employees. The absence of clear direction in constantly shifting priorities and strategies can lead to uncertainty and erode staff morale and commitment (Ngui, 2019). The Denison culture model posits that an inflexible commitment to the organization's mission could hinder its ability to pursue new prospects or adjust to shifts in the external environment (Kageni, 2021). Should the mission of the organization fail to align with the values and requirements of its stakeholders, it may encounter difficulties in sustaining support and relevance over an extended period (Otoo, 2019). The Denison culture model, which focuses on mission, adaptability, involvement, and consistency, has a beneficial influence on both organizational resources and organizational overall performance. The present model incorporates Organization Culture as a moderating variable.

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2.3 Conceptual Review

An overview of study variables explained in this thesis includes Organizational Resources (Financial Resources, Human Resources, Technological Resources and Intellectual Property), Organizational Performance and Organization Culture.

2.3.1 Financial Resources

Financial resources refer capitalize on liquidity state of a firm (Karltorp, 2016). Ngui (2019) examined financial resources on the basis of sources of funding, volume of funding, accountability and operational efficiency all the same (Kageni, 2021) studied financial resources with availability of owners' equity, availability of bank loans and availability of Short term investment as constructs while Kiswili (2021) had timely fund release as indicators of financial resources. This study examined financial resources on basis of disbursement of funds, adequacy of funds and accessibility of funds.

2.3.2 Human Resources

Human resources equally known as human capital refers to the people who make up the personnel of an organization (Petrick, 2017). The human resources department is responsible for overseeing various employment aspects, including compliance with laws, adherence to employment standards, administration of employee benefits, organization of employees' files with necessary documents for future reference, and recruitment management. Moreover, human resource management addresses matters pertaining to the personnel (Tracey, 2016). The human resources staff is responsible for providing guidance to senior staff on the impact of human resources on their budgetary, planning, and performance choices. A study conducted by Otoo (2019) revealed that employees' competences had a significant influence on the relationship between human resources and firm success. According to Moustaghfir, El Fatihi Benouarrek (2020), human resource management offered a helpful leverage in an organization's quest to attain desired performance. The present study investigates human resources by analyzing several indicators including staff competence, staff sufficiency, staff experience, staff dedication, and staff learning capacity.

2.3.3 Technological Resources

Technology refers to use of computers and internet to facilitate, improve and fasten operations that could however be achieved manually. This reduces time needed to attain performance goals. This was explained by diffusion of innovation theory where creativity or rather innovativeness is needed to steer performance. Universities that incorporate technology performed better than those that did not (Masai, 2017). Masai (2017) further asserts that service delivery among public universities in Kenya specifically in Kenyatta University was enhanced through ICT adoption. This study measured technological resources through staff IT compliance, technical innovations, technology availability, technology adequacy, technology effectiveness, research and development.

2.3.4 Intellectual Property

This refers to unique skill owned by an individual or a firm that makes performance easily achieved (Dzhandzhugazova et al, 2017). Intellectual resources, sometimes referred to as intellectual capital, encompass the intangible assets of a business such as brand, intellectual property (IP), patents, copyrights, and collaborations. Further types of intellectual resources encompass consumer knowledge, as well as the list and personnel within the organization. Development of intellectual resources necessitates a significant investment of time and money. The present study investigated intellectual property by assessing its parameters of innovativeness, number of new patents, number of new procedures, and number of research publications.

2.3.5 Organization Culture

Organization Culture influences an institution's ability to innovate and adapt to changing circumstances. A culture that encourages risk taking and experimentation is more likely to foster innovation and respond effectively to external challenges and opportunities. Conversely, a culture that is resistant to change or overly bureaucratic may inhibit innovation and make it difficult for the university to adapt to new trends and technologies (Revenio & Nasra, 2017).

Overall, the Organization Culture of a public university plays a critical role in shaping how resources are allocated and utilized, as well as influencing performance outcomes across various dimensions including student success, research productivity, and administrative efficiency (Moshtari & Safarpour, 2023). Therefore, fostering a positive and supportive culture is essential for promoting the long-term success and sustainability of the institution. Waithaka, (2023) focused on involvement, adaptability and consistency while studying Organization Culture as a moderator. This study measured organization culture through mission, adaptability, involvement and consistency

2.3.6 Organizational Performance

According to Neneh (2016), organizational performance is defined as the degree to which a corporation achieves its goals within a specified timeframe. There may be a connection between organizational performance and productivity and quality improvement. The real output, or attainment of goals and objectives, is what makes universities perform. Competitive advantage in public universities arises from the uniqueness among the universities and at the same time how the specific university takes advantage of its unique resources to outplay others (Shisia & Wanjere, 2019). The financial success of a university is measured by outcome-based indicators that represent its economic objectives. On the other hand, the non-financial performance focuses on operational performance, including market share, efficiency, novel product development, and innovation. Higher education institutions employ student enrolment, rankings, research outputs, publications, grant funding, graduation rates, and faculty reputation as indicators of achievement. This study analyzes performance by considering data on grant revenue, student enrolment, institutional rating and employee satisfaction.

Amount of revenue from grants (grant revenue) refers to the total financial resources that a university receives from external sources in the form of grants. The amount of revenue from grants in public universities can serve as a measure of performance for several reasons. Grants, particularly those from competitive sources, are often indicators of the institution's research capacity, innovation, and ability to contribute to societal and academic advancements. Research funded by grants can lead to the development of new technologies, industries, and jobs, contributing to economic growth. The World Bank (2017) highlights the role of universities in fostering economic development through grant-funded research, emphasizing the broader economic impact of higher education.

Student enrolment refers to the total count of students who are officially registered and attending courses at a public university, during a specific academic period (e.g., a semester or academic year). This figure typically includes both full-time and part-time students across all levels of study—undergraduate, postgraduate, and sometimes professional programs. A high number of students enrolling in a university often reflect strong demand for its programs. This demand can be an indicator of the institution's perceived quality and relevance. According to Altbach et al. (2019), the growth in enrolment numbers can indicate that a university is successfully attracting students, which often correlates with the institution's reputation and perceived value in society.

Institution rating refers to a system that ranks higher education institutions based on various criteria to assess and compare their performance, quality, and overall reputation. These rankings are typically published by independent organizations, research institutions, or media outlets. Rankings provide a comparative assessment that can help gauge how well a public university is performing relative to its peers. Hazelkorn, (2015) argues that academic reputation, as reflected in university rankings, is a critical component of a university's performance and its ability to attract top students and faculty. A high ranking suggests that a public university is recognized for its academic excellence, teaching quality, and overall educational environment.

Public university employee satisfaction refers to the overall contentment and sense of well-being experienced by staff members working at a public university which encompasses various factors that contribute to how satisfied employees are with their job roles, work environment, and overall employment conditions. Satisfied employees are typically more motivated and engaged, leading to higher productivity and better performance. This increased productivity can directly affect the quality of teaching, research, and administrative functions at the university. Universities with high levels of employee satisfaction are likely to retain experienced staff, reducing the costs and disruptions associated with high turnover. Satisfied employees are more likely to deliver better teaching and support services, which enhances the overall student experience and academic success. Hoxworth, Nicholson, and Lucas (2020) found that faculty and staff satisfaction has a direct effect on student satisfaction and academic success, emphasizing the importance of a supportive work environment.

2.4 Empirical Review

This area covers empirical studies done in the past relative to organizational resources. The studies reviewed are relative to organizational resources and performance respectively.

2.4.1 Financial Resources and Performance

Rubasin and Nuradhi (2021) undertook a research investigation on the influence of financial resources on the financial performance of Sri Lanka. The statistical findings suggested a positive relationship between financial resources and financial performance. The findings of this study demonstrated that the availability of financial resources can result in enhanced financial performance. The study was conducted in Sri Lanka and current study was done in Kenya.

Moshtari and Safarpour (2023) examined the obstacles and approaches associated with the globalization of higher education in low-income East African nations. Following a thorough examination of the literature and interviews with scholars, the collected material underwent thematic analysis. The findings indicated the presence of obstacles such as a dearth of explicit policies and guidelines, the ineffectiveness of the organizational framework of internationalization, financial, infrastructure, and equipment issues, deficiencies in scientific, skill and language proficiencies, cultural disparities, non-reciprocal relationship dynamics and a brain drain. Thus in this study finances was listed as one of the obstacles.

Nkosi (2015) noted that resources were crucial in a study done in South Africa's Mpumalanga local Municipality on factors that affect strategy implementation where inadequate financial resources was pointed out as being a significant challenge in implementing strategy. Bua and Ibuh (2014) investigated how financial management impacted on secondary school's administration performance in Nigeria. Findings revealed that of payment the employees' salaries and allowances promptly significantly impacted on the secondary schools management performance. However, these studies were done in South Africa and Nigeria respectively and the current study was done in Kenya public universities that are found in the western region.

A study done in Ghana's government owned firms by Faderai (2016) using descriptive survey research design established that allocation of adequate financial resource impacted on performance thus resource allocation was crucial for ensuring success of organizational projects and performance. Abdulrahman and Bamiduro (2018) employed descriptive research design to study Nigeria's colleges of legal and Islamic studies colleges on the link financial resource allocation had on organizational effectiveness and established that both capital and recurrent expenditure as well as revenue received from internal sources affected organizational effectiveness. The current study was conducted in Kenya as opposed to the studies that were done in Ghana and Nigeria respectively.

Using cross sectional survey research design Kithusi (2015) examined the influence of firm resources, the moderating role of the external environment and the intervening role of entrepreneurial strategy on MSME performance The study focused on MSMES's in Nairobi county operating in furniture sector. The study employed the use of a cross sectional survey design. Primary data was collected using self-administered questionnaires. The findings revealed that firm resources significantly influenced on firm performance. Firm resources was measured in terms of managerial experience, financial resources, human resources and reputation. The study by Kithusi (2015) was conducted on MSMEs as opposed to the current study that was undertaken on Public universities. Moreover cross sectional survey research design was used while the current study used descriptive and correlational research design. Wanyama (2020) conducted a study in Kenya's regional development authorities (RDA) and investigated the influence corporate governance had on the link between organizational resources and performance. Organizational resources was measured in terms of financial, human and technological resources. Explanatory research design was adopted. The study found that corporate governance significantly moderated the association between organizational resources and performance and organizational resources significantly influenced performance. Studies by Kithusi (2015) and Wanyama (2020) focused on overall effect of organizational performance in as much as they both had financial resources as an indicator of organizational performance.

Ochola, Nyamita and Okello (2022) investigated the impact of financial resources on the managerial effectiveness of decentralized administrations in Kenya. A stratified random sampling technique was employed, with a sample size of 381 respondents. Data was collected by the administration of a questionnaire. The data analysis included both descriptive and inferential statistics to ascertain the trend of the study variables and make predictions about the variables, respectively. The study reported its findings in tables and figures. Regression analysis revealed that the computed p values for financial resources ($p=0.002$) were statistically significant ($p<0.05$). The report appraises the need of devolved governments taking proactive measures to ensure the availability of financial resources for enhancing service delivery to the local population. The study's dependent was managerial effectiveness and was conducted on decentralized administrations in Kenya while the current study's dependent variable was performance and was conducted on public universities

Thendu (2023) while conducting regression analysis established that firm resources influenced performance of Kenya's aviation industry safety management system. Kiswili (2021) and Mbugua (2024) revealed that financial resources significantly and positively influenced deposit taking Sacco's and commercial banks agency banking performance in Kenya. The sector's were different that is aviation industry and deposit taking Sacco's.

2.4.2 Human Resources and Performance

Al-Khaled and Al-Khaled, Sultan and Chung, Jee Fenn (2020) highlighted that organizations that used strategic human resource management practices (SHRMPs) showed a sustainable ability to achieve their objectives and thrive in their relevant sectors. Moreover, these entities were able to effectively maximize their human resources as a consequence. The current study was done in Kenya as opposed to Nigeria.

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Using descriptive research design Rani (2019) investigated the HR practices that influence firm performance in India. The study focused on Training & Development, Recruitment & Selection and Performance Appraisal. The study confirmed that HR practices were determined performance of firms. Vivares, Sarache and Naranjo (2016) discovered no significant relationship between HRM practices and performance in competitive businesses. Drawing on human capital theory, the research conducted a survey of a representative sample of medium and large industrial companies located in the Colombian coffee region. The context (Colombia) and sector (medium and large industrial companies) was different from the current study's context (Kenya) and sector (public universities)

Sembiring (2016) surveyed 179 academicians and support staff members at the University of Debre Brehan in order to determine the effect that HR knowledge and skills had on the performance of SMEs in Medan City, Indonesia. The quantitative study demonstrated that human resources methods such as recruitment and selection, training, evaluations and compensation exerted a substantial correlation with university performance. The research focused on exploring a specific academic institution located overseas rather than in Kenya.

Odhon'g and Omolo (2015) sought to assess the effects of human capital investment on the performance of Kenyan pharmaceutical enterprises. Grounded in the theories of human capital, skills learning and sustainable resources, the study used a descriptive research approach. Data was collected using questionnaires from a sample of 200 individuals chosen at random from pharmaceutical companies in Kenya. Analysis using descriptive statistics and inferential methods demonstrated a positive correlation between investment in personnel and company performance. However the study focused on pharmaceutical companies, unlike the current study which was done in public universities.

Ruga, Kiruja, and Sagwa (2022) looked into the effect of strategic human resource management practices on the performance of public universities in Kenya. This study used a descriptive research strategy based on a census approach. All of Kenya's state universities were considered for the study. A self-administered questionnaire was used to collect data from 31 public universities in Kenya. Naitore and Wanyoike (2019) used a descriptive design targeting 13 universities in Kenya and established that performance was positively and significantly correlated with strategic human resource management practices, specifically HR planning and staffing.

Using a cross sectional descriptive survey Ongeti and Machuki (2018) conducted a study on the influence organizational resources had on performance of Kenyan state corporations. The study focused on tangible, human, intangible resources and organizational capabilities. Data was analyzed using both descriptive and inferential statistics. The findings revealed organizational resources had a statistically significant influence on performance.

Mwai, Namada and Katuse (2018) found a positive and insignificant influence of HR on perfomance. Mutahi and Busienei (2015) investigated the impact of strategic human resource management (HRM) strategies on the performance of public universities in Kenya. Strategic rewards and employee training were identified as crucial techniques in this scenario. The authors proposed the implementation of a suitable employment policy to promote job stability. They also suggested that the government should base the recruitment and selection processes in universities on the principle of equalizing employment opportunities. This should include regular evaluation of employee skills and a renewed emphasis on identifying training needs for optimal employee development, among other measures.

2.4.3 Technological Resources and Performance

Keitany, Chepkilot, and Tanui (2019) investigated how technological innovation affected the universities in Nakuru Town, Kenya, in terms of their competitiveness. Technology Acceptance Model served as the guiding framework for the investigation. The study employed a descriptive research study design. In this study, the target group consisted of 62 staff members who held positions as head of departments, registration staff, and director of online learning at six campuses in Nakuru town, Kenya. Compiled data was obtained by a structured questionnaire. Data underwent analysis using both descriptive and inferential statistical methods. The research findings indicated a strong and statistically significant correlation between online teaching and the use of smart boards with the competitiveness of colleges. The report proposed that institutions should prioritise the implementation of management information systems and online teaching platforms. This study utilized a combination of descriptive and correlational research designs, rather than relying only on descriptive research design.

Chairoel, Widyarto, and Pujani (2015) examined the impact of adopting information communications and Technology (ICT) on the performance of small and medium-sized enterprises (SMEs) in Indonesia. A conceptual model that integrates Iocovou's framework with theories on the dissemination of innovations and technology organization-environment was utilized in the study. In terms of internal factors influencing the adoption of ICT, the results showed that technological, managerial, and organizational features all have an impact. The organizational performance of SMEs was evaluated using operational performance metrics (such as cost reduction and productivity) and financial performance metrics (such as profit margin and market share) to determine the extent to which ICT improved efficiency and effectiveness. Yet, a conceptual framework for ICT adoption in Indonesian SMEs was the primary emphasis of the empirical study. This study aimed to address a gap in the existing literature by specifically addressing public universities in Kenya.

Revenio and Nasra (2017) used a simple random sample technique to select 60 students from the International College of Engineering and Management to assess the effects of information and communication technology on the school's overall performance. Results showed that there is a positive correlation between ICT use and organizational performance. They also corroborate findings from Girma (2016), who found that ICT has an impact on Ethiopian commercial banks' performance, and Mukangu and Ndungu (2016), who found that ICT implementation improves design process, inventory management, productivity, and reduces costs for organizations. However, the study focused solely on the impact of ICT on performance and excluded the consideration of organizational resources.

Wahu and Assumptah (2017) surveyed 3,986 airline workers to learn how information and communication technology (ICT) initiatives affected productivity. Using stratified random sampling, the research selected 98 workers to participate in the study. Unfortunately, the study only included Kenya Airways, thus its findings won't apply to other public colleges in Kenya. While this study's conclusions that ICT contributes to high performance are consistent with those of Revenio (2017) and Chairoel *et al.* (2015), it failed to account for the impact of organizational resources on performance since it just examined ICT adoption. Masai (2017) used a descriptive survey with purposive and simple random sampling to examine the function of information and communication technologies (ICT) in the provision of services at Kenyatta University, one of the country's public universities. The study included 6, 1946 students and 10 department heads. An interview guide and research questionnaire were part of the research tools. A favorable and substantial effect on service delivery was shown to result from investments in ICT. While the study looked at the impact of technical resources on the performance of public institutions in Kenya's Western region generally, it concentrated solely at Kenyatta University specifically.

2.4.4 Intellectual Property and Performance

Kageni (2021) looked at how deposit-taking Saccos in Kenya's Kiambu County fared after implementing strategic organizational resources. Research in this area aimed to determine how deposit-taking SACCOs in Kiambu County fared in relation to various resources, including human capital, financial capital, intellectual property, and physical resources. Three theories—the balanced scorecard, organizational learning, and resource-based view—formed the basis of the study. The researchers opted for a descriptive survey approach. A total of 227 members of Kiambu County's management team were surveyed for this study. This group included 26 executives, 67 middle managers, and 134 entry-level employees. A semi-structured questionnaire was used to obtain data for the study. This study utilized the ordinary least squares regression model. According to the results, strategic resources significantly affected DTS performance in Kiambu County. The analysis concludes that DTS's management should prioritize the acquisition and optimal configuration of strategic resources in order to maximize performance based on these findings. Instead of universities, the research focused on SACCOs. Camfield, Giacomello, and Sellitto (2018) set out to determine how much of an effect intellectual capital had on the performance of Brazilian businesses that had won Quality Award between 2004 and 2017. Recognized Brazilian businesses from 2004–2017 were the focus of the research. Although intellectual capital is a crucial asset, the study found that there were variations in the presence level and significance of the elements within the specified period. Although the study sheds light on the correlation between IP and performance, it should be noted that the sample did not encompass the whole population since it was based on Brazilian companies that had achieved great success and had won Quality Award in the previous five years. Additionally, this study only took intellectual capital into account, not other resources such as human, financial, and technological capital that organizations have.

Omar and Muathe (2021) set out to establish intellectual capital and operational performance in their study of Kenyan commercial banks. Adhering to the study population, this research utilized a descriptive technique and relied on survey methodology to collect quantitative data. The plan's intended targets were the 44 commercial banks with operations in Nairobi. As its principal means of data collection, the questionnaire was widely deployed. We gathered secondary data from a variety of sources, including news articles, bank reports, NSE filings, and institutions that deal with research. According to the research, commercial banks in Kenya can improve their operational efficiency by investing in intellectual resources such as human capital, regular training, updated information systems, and conducting process and procedure reviews to align with current trends. Even though it was conducted in Kenya, the research focused on listed commercial banks, which have bigger balance sheets and deposits. Further, the results might not apply outside of the present research setting because commercial banks' scope is distinct from that of academia. Olthaar and Noseleit (2017) found that Ethiopian farmer cooperatives were successful in utilizing strategic resources. But many still don't use them. However, neither the studies nor the resources themselves were identified as having a connection to strategic resources and company performance. It is worth noting that Nwachukwu and Chladkova (2019) also found evidence of a favorable and statistically significant relationship. Murimi, Ombaka, and Muchiri (2019) looked at how strategic physical resources affected the productivity of medium manufacturing companies in Kenya. The study's population consisted of 183 managers drawn from 350 registered firms with the Kenya Association of Manufacturers (KAM). The results demonstrated that resources have a substantial impact on the performance of SM manufacturing firms in Kenya. Though it was done among manufacturing enterprises under KAM, this study was closely similar to the one before it. The information was not inferred, as the current study was conducted in enterprises located in public universities.

2.4.5 Moderating influence of organization culture on the relationship between organizational resources and performance

Rizal, Hartanto, Muthofa, and Suharmanto (2020) looked at how a moderate company culture affected the connections between happy workers and productive businesses. Staff members of Indonesia's National Search and Rescue Agency in the city of Semarang were the subjects of the research. This study used a census or population sampling technique with a total of 124 respondents. Organizational culture acted as a moderator between job satisfaction and employee performance, and the two variables were positively and significantly related to one another. Nonetheless, public Kenyan colleges were not the focus of the research; rather, it was Indonesia's National Search and Rescue Agency.

Victor Chung and Jenny Espinoza (2023) examined the moderating effect on the link between transformative leadership and knowledge management. Several public universities in Peru participated in the study by completing online surveys. Both qualitative and quantitative methods were used to analyze the data. Organizational culture moderated the association between transformational leadership and knowledge management, according to the study's results. The researcher hopes to conduct a study in Kenya, which would provide a distinct setting and independent variables, as opposed to Peru, South America, where the last study was conducted. Therefore, the outcomes of the current study cannot be applied to a broader context. In their study, Asikhia et al. (2022) investigated at how organizational culture mediated the connection between GHRM and competitive advantage. They used a quantitative methodology, surveying workers in a subset of the Nigerian food and drink industry in Lagos State to compile their findings. The research found that green HRM has an adverse influence on competitive advantage, with organizational culture acting as a moderator. Public universities in Kenya's western region were the focus of the present study, in contrast to a previous one that focused on a subset of the food and beverage industry in Lagos State, Nigeria.

According to research conducted by Mande, Awiti, Imbambi, and Aketch (2019) workforce diversity and employee performance, organization culture plays a crucial role in mediating this relationship. The study surveyed every department head in western Kenyan public universities; this study used a stratified and simple random sample technique to examine a moderating role of organizational culture. Waithaka (2023) on the research into competitive intelligence strategy inputs and competitive advantage in Kenyan commercial banks. In contrast to the present study, which focused on public universities in Kenya's western region rather than commercial banks, the former used involvement, adaptability, and consistency as its metrics for measuring organizational culture. The operational environment of the banking business is very different from that of the education sector, hence the results of this study, which used three of the same measures, cannot be applied there.

2.5 Summary and Research Gaps

Table 2. 1: Summary Table of the Research Gaps

Author	Focus of study	Research Design	Findings	Knowledge gaps	Filling the gap
Keitany, Chepkilot and Tanui, (2019)	Influence of technological innovation on competitiveness of Universities in Nakuru Town, Kenya	Descriptive research design	Online teaching had a positive and significant relationship with the competitiveness of the universities	The study was on technological innovation.	The current study was on technological resources
Camfield, Giacomello and Sellitto (2018)	Importance of intellectual capital and its impact on performance of companies in Brazil	Descriptive research approach	Intellectual capital is	The study was on intellectual capital	The current study was on intellectual property
Omar and Muathe, (2021)	To determine the association of intellectual capital and operation performance	Descriptive research approach	Intellectual Resources significantly impacts on the operational efficiency of commercial banks in Kenya	The study was on commercial banks in Kenya	The current study was on public universities in Western Kenya.
Ruga, Kiruja & Sagwa, (2022)	Influence of strategic human resource managem	Descriptive research design, in a census approach	Statistically significant relationship between strategic human	Focused on strategic human resource	The current study was on organizational resources and

Author	Focus of study	Research Design	Findings	Knowledge gaps	Filling the gap
	ent practices on performance of Public Universities in Kenya		resource and performance of Public Universities in Kenya		performance of public universities in Western Region Kenya.
Asikhia, Oduyoye, Nanle,& Akinlabi, (2022)	To establish the Moderating effect of Organization Culture on green human resource management and competitive advantage.	Survey research design	Organization Culture negatively moderated the effects of green human resource management on competitive advantage.	The study focused on green human resource management on competitive advantage.	The current study was on organizational resources and performance of public universities
Murimi, Ombaka and Muchiri (2019)	To determine the effect of physical resources on performance of small-medium manufacturing firms in Kenya	Targeted 183 Management staff of 350 manufacturing SMEs.	Physical resources significantly influence performance of SME manufacturing enterprises in Kenya	The study was conducted among manufacturing SMEs under KAM	The current study was conducted on public universities in Western Kenya
Neneh, (2016)	How financial literacy affects the performance of a firm and evaluate the moderating effects of	Convenience Sampling method	SME financial literacy and availability of financial capital levels are low financial literacy positively affect	The study was on SMEs in South Africa	The current study was on organization resources and performance of public universities in Western Region, Kenya.

Author	Focus of study	Research Design	Findings	Knowledge gaps	Filling the gap
	availability of financial capital on financial literacy and performance relationship in SMEs in South Africa		performance of SMEs		

Source: Reviewed Literature

2.6 Conceptual Framework

Conceptual framework refers to the relationship between study variables (Kothari, 2014). This study examined relationship between organizational resources (independent variable) and performance (dependent variable) moderated by Organization Culture.

Independent variable

Organizational Resources

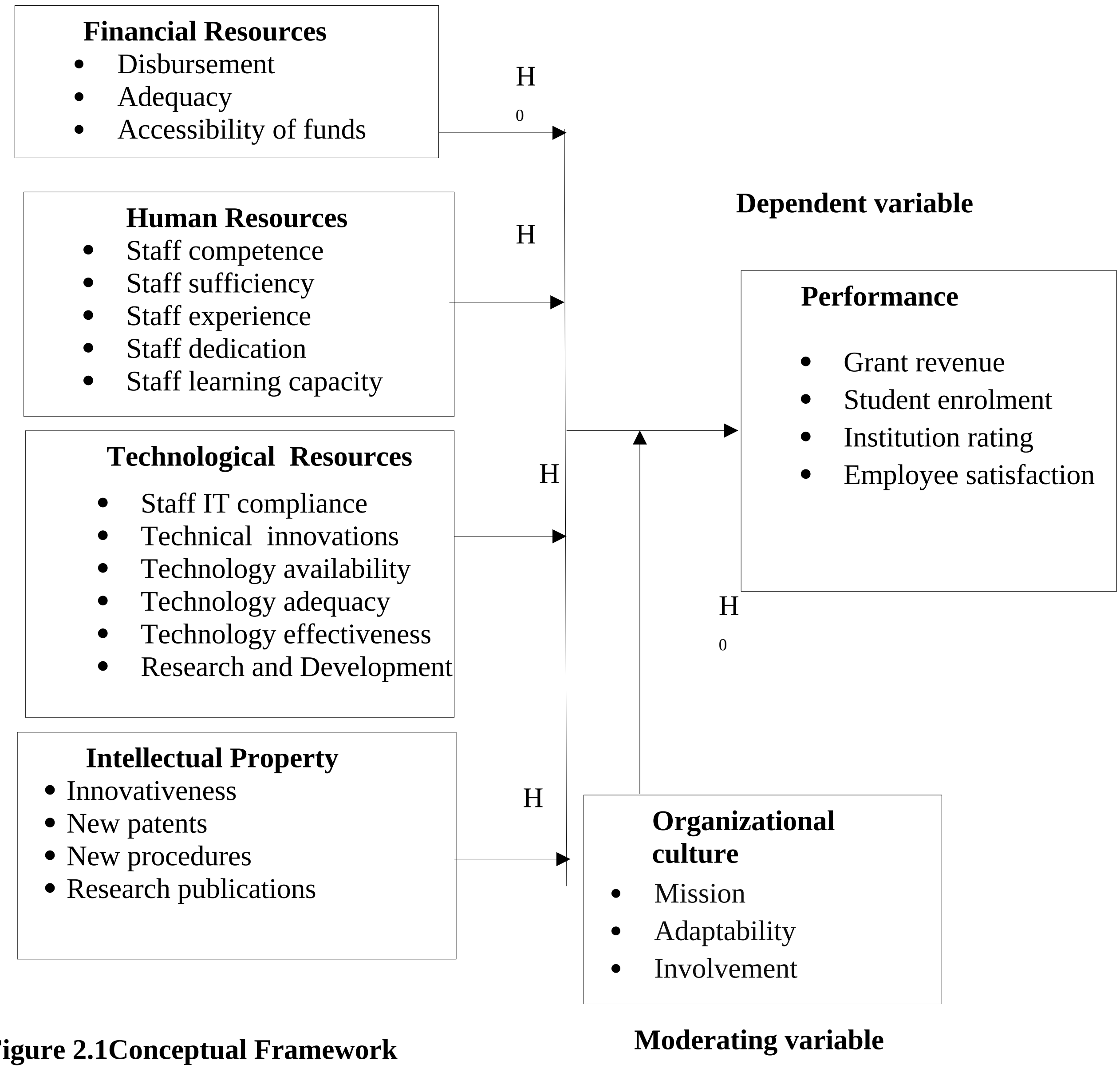

Figure 2.1Conceptual Framework

Source: (Kageni, 2021: Ngui, 2019: Waithaka, 2023)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section entails research area, research design, target population, sample size, sampling techniques, data collection instruments, data collection procedure, pilot, validity, reliability and data analysis.

3.2 Study Area

The study was conducted in Western region public universities. The region thus former Western and Nyanza provinces. The region borders Transnzoia, Uasin Gishu, Nandi, Narok, Bomet and Kericho Counties. The region has ten public universities of which 4 four based on dimensional resources capacity (CUE, 2018) was the basis of this research. These include Masinde Muliro, Kibabii, Maseno and JOOUST.

3.3 Research Design

This study applied descriptive design and correlational design. That is, descriptive research design involves collecting data that answers questions from sampled participants of the study. It is appropriate when the researcher wishes to provide an accurate representation of persons, events or situations, according to Saunders *et al*. (2012), and make inferences about the target population. Correlational research design is of value in assessing the relationship between study variables.

3.4 Target Population

Cooper and Schindler (2014) agreed a population explains the complete collection of cases or items from which a suitable sample is selected for study. It encompasses all the elements that the research aims to draw conclusions about. On the other hand, a population element is the specific item that is measured. The target population consisted of university departments responsible for budgeting, procurement, internal auditing, accounting, human resources, and information and communication technology.

Table 3. 1: Target Population

Category of Management Staff	Masinde Muliro	Kibabii	Maseno	JOOUST	Total
Finance Officers	9	7	5	4	25
Procurement Officers	6	5	4	4	19
Internal Auditors	5	4	3	3	15
Accountants	15	12	10	9	46
Human Resource Officers	5	3	2	2	12
ICT Officers	16	11	9	7	43
Total	**56**	**42**	**33**	**29**	**160**

Sources: University Employee Data (2023)

The study target population was 160 as shown above

3.5 Sampling Techniques and Sample Size

A sample is as a subset of cases from the main population deliberately chooses for examination to establish factual information about that population. Accordingly, as the population size increases, the proportion to obtain a sample decreases. However, Cooper and Schindler (2014) argued that the sample size should be bigger in order to achieve the necessary level of precision in the estimate.

The research employed both stratified sampling and simple random sampling methods. This approach aims to minimize errors and enhance the representativeness of the sample. The researcher randomly chose samples from each stratum of university departments responsible for budgeting, procurement, internal auditing, accounting, human resources, and information and communication technology in the four universities located in the western area of Kenya. This technique is often implemented using random number generators or random selection methods to guarantee impartial selection.

Taro Yamane's proportional sampling formula, computed as follows;

$n= N/ (1+ N (e)^2)$;

Therefore;

$n=160/ (1+160 (0.05)^2)$

$n=160/ (1+160 (0.0025))$

$n= 114.3$ rounded off to 114

Therefore the study's sample size was 114 as distributed.

Table 3. 2: Sample size

Management staff	No. of officials (N)	Sample n= (N/Target Pop.)x Sample size)
Finance officers	25	25/160x114=17
Procurement officers	19	19/160x114=14
Internal auditors	15	15/160x114=11
Accountants	46	46/160x114=33
Human Resource officers	12	12/160x114=9
ICT	43	43/160x114=30
Total	**160**	**114**

Source: University Employee Data (2023)

Table 3.3: Sample per category

Category of Management Staff	Masinde Muliro	Kibabii	Maseno	JOOUST	Total
Finance Officers	7	5	3	2	**17**
Procurement Officers	4	4	3	3	**14**
Internal Auditors	4	3	2	2	**11**
Accountants	11	9	7	6	**33**
Human Resource Officers	3	2	2	2	**9**
ICT Officers	12	8	6	4	**30**
Total	**41**	**31**	**23**	**19**	**114**

Sources: University Employee Data (2023)

3.6 Data Collection Instruments

The primary data through questionnaire was sought. The questionnaire consisted of Section A for demographic information, section B organizational resources and its constructs, section C Organization Culture, section D performance and its measures.

3.6.1 Data Collection Procedures

As required by research ethics, the researcher drafted researcher's introductory letter, plus research authorization letter from MMUST; before carrying out research in Public universities Western region, Kenya. Therefore, research instruments was administered through drop and pick technique. This was enabled through four research assistants one per university.

3.6.2 Pilot Testing

A pilot study was done on 10% of sample (114) giving 11 respondents for piloting. Piloting took place at University of Eldoret due to it bordering Western region hence closer similarities to study region. Cronbach (1951) and the pilot test results should show a Cronbach alpha of 0.7 and above based on empirical research and practical research in the field of psychometrics, so as to confirm reliability.

3.7 Validity of Instruments

The study applied content and construct validity where in content validity; the questionnaire was discussed with experts in the area of strategic management who assessed the instruments. Construct validation was tested using factor analysis where KMO and Bartlett's test was done and component matrix was extracted.

3.9 Operationalization of Study Variables

This study examined relationship between organizational resources (independent variable) and performance (dependent variable) moderated by Organization Culture. The study variables were operationalized as illustrated in Table 3.4

Table 3. 4: Operationalization of Study Variables

Nature	Variable	Indicator	Measurement	Questionnaire item
Independent	Financial resources	Disbursement Adequacy Accessibility	5 point type likert scale	Section B Part I
	Human Resources	Staff competence Staff sufficiency Staff experience Staff dedication Staff learning capacity	5 point type likert scale	Section B Part II
	Technological Resources	Staff IT compliance Technical innovations Technology availability Technology adequacy Technology effectiveness Research and development	5 point type likert scale	Section B Part III
	Intellectual property	Innovativeness Number of new patents Number of new procedures Number of Research publications	5 point type likert scale	Section B Part IV
Moderating	Organization culture	Mission Adaptability Involvement Consistency	5 point type likert scale	Section C
Dependent	Organizational performance	Grant Revenue Student Enrollment Institution rating Employee satisfaction	5 point type likert scale	Section D

Source: Reviewed Literature (2024)

3.10 Data Processing and Analysis

Pearson's correlation analysis determined the direction and strength of the relationship between two continuous variables, found patterns and associations between them, tested for homoscedasticity and linearity, and found variables that were highly correlated.

These variables could be combined or removed to simplify the analysis and improve the model's performance. Data was shown in the form of models and tables.

The multiple regression;

$Y = \beta_0+\beta_1X_1+\beta_2X_2+\beta_3X_3+\beta_4X_4+\varepsilon$……………………………………………………………………….Model 5

Hierarchical regression;

$Y = \beta_0+\beta_1X_1+\beta_2X_2+\beta_3X_3+\beta_4X_4+ \beta_0M+ \beta_1X_1M+\beta_2X_2M+\beta_3X_3M+\beta_4X_4M+\varepsilon$…………..Model 6

Y = Performance

β_0 = Constant

β_1- β_4 = Beta coefficients

X_1 = financial resources

X_2 = human resources

X_3 = technological resources

X_4 = intellectual property

M = Organization culture (Moderator)

ε = the error term

3.10.1 Regression Assumptions / Diagnostic Tests

The following assumptions as that underlie multiple regression model of analysis as summarized by (Hair *et al.* 2006) was put into consideration.

Normality This was accomplished by employing statistical techniques such as Kolmogrov-Smirnov and Shapiro-Wilk tests, where a lack of significance indicates the existence of normal variation in the distribution. A p-value greater than 0.05 indicates the absence of normalcy.

Multi-collinearity The Variance Inflation Factor (VIF) and Tolerance level were employed to assess multi-collinearity. A VIF below 10 or a tolerance level above 0.1 is permitted.

Homoscedasticity It refers to the condition where the variance of the residuals (errors) is constant across all levels of the independent variables. This was tested through scatter plot.

Test of Linearity refers to the extent to which the variation in the dependent variable is associated with the variation in the independent variable. This analysis was conducted by comparing means.

3.11. Ethical Consideration

Ethics is a section of beliefs that handles decency (Akaranga & Makau, 2016). Ethical consideration upheld because the researcher dealt with people as participants. This is essential in research because it strives for the accord of the respondents, because nobody would be coerced to take part in the survey (Roberts & Allen, 2015). In this study, the researcher observed high degree of confidentiality, informed consent and privacy of the respondents. Moreover, the researcher dully acknowledged all sources referred to in the study. In conclusion, the researcher sought a research permit.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter contains the results, conclusions, and observations of the analysis. Empirical findings and outcomes were presented through the use of descriptive analysis, Pearson correlation and regression analysis. The data was gathered via the distribution of questionnaires and thereafter processed and analyzed using the Statistical Package for the Social Sciences (SPSS), taking into consideration each independent variable. The results were subsequently analyzed and conveyed through the use of tables and models.

4.2 Response Rate

As indicated in table 4.1, a response rate of 77.2% was achieved out of 114 questionnaires that were distributed to the sampled respondents; 88 of these questions were filled out successfully. A minimum of 50% response rate is acceptable. This study's response rate of 77.2% is considered acceptable since it is higher than the 50% threshold (Mugenda & Mugenda, 2013).

Table 4. 1: Response Rate

Questionnaires	**Total**
Administered	114
Returned	88
Response Rate	77.2%

Source: Field Data (2024)

4.3 Reliability and Validity Tests

4.3.1 Reliability Test

Reliability tests were performed for each variable.

Table 4. 2: Reliability

Variable	Cronbach alpha
Financial resources	0.739
Human resources	0.703
Technological resources	0.823
Intellectual property	0.851
Performance	0.871

Source: Field Data (2024)

A Cronbach alpha value greater than or equal to 0.7 was considered to be indicative of reliability. Financial resources at 0.739, human resources 0.703, technological resources 0.823, intellectual property 0.851 and performance 0.871 confirmed reliability.

4.3.2 Validity Test

The supervisor's advice led to enhancements in the contents and perceptions of the devices. The questionnaire was designed to ensure that each item was relevant and connected to the overall purpose. This ensured that any inquiries pertaining to the research were addressed. The supervisor's suggestions were included into the questionnaires prior to the final presentation of the study instruments to the participants.

Table 4. 3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.636
Bartlett's Test of Sphericity	Approx. Chi-Square	175.400
	Df	6
	Sig.	.000

Source: Field Data (2024)

The KMO evaluates the appropriateness of data for doing a factor analysis. The range of values for factor analysis suitability is 0 to 1as 1 indicating a high level of suitability for factor analysis. The KMO score of 0.636 in this example indicates that the dataset is suitable for factor analysis. It signifies that the variables in the dataset are sufficiently correlated, allowing for meaningful interpretation.

Table 4. 4: Communalities

Communalities	Initial	Extraction
The amount of revenue from grants generated by the university has increased in the past three years	1.000	.705
The number of students enrolled has increased in the past three years	1.000	.726
The university ranking has improved in the past three years	1.000	.585
The university employee satisfaction and morale has improved in the past three years	1.000	.715
Extraction Method: Principal Component Analysis.		

Source: Field Data (2024)

The initial communalities for all variables are 1.000, indicating that each variable initially explained all of its own variance. The values of the communalities after extraction range from .585 to .726, suggesting that the extracted components account for a substantial portion of the variance in each variable. Higher communalities indicate that the variable is well-represented by the extracted components, while lower communalities suggest that additional factors may be influencing the variable. Overall, these results suggest that the variables are suitable for further analysis using Principal Component Analysis, as the extracted components explain a significant portion of the variance in each variable.

Table 4. 5: Component Matrix

	Component
The amount of revenue from grants generated by the university has increased in the past three years	.840
The number of students enrolled has increased in the past three years	.852
The university ranking has improved in the past three years	.765
The university employee satisfaction and morale has improved in the past three years	.846

Source: Field Data (2024)

These results present the factor loadings for each variable after conducting Principal Component Analysis to extract components. Factor loadings represent the correlation between each variable and the extracted component. Higher factor loadings indicate stronger associations between variables and components. In this case, the factor loadings range from .765 to .852 for the single component extracted which were above 0.4. Each variable shows a strong positive correlation with the extracted component, suggesting that they are all closely related to the underlying factor identified by Principal Component Analysis. This suggests that the identified component represents a coherent construct capturing various aspects of performance.

4.4 Descriptive Information on Demographics

Table 4. 6: Descriptive Information on Demographics

Characteristics (N=88)	Indicator	Frequency	Percentage
Job category	Finance	10	12.3
	Procurement	21	23.9
	Internal audit	7	8.0
	Accounting	16	17.2
	Human resource	8	9.1
	ICT	26	29.5
Education Level	Certificate/Secondary	7	8.0
	Degree	60	68.2
	Diploma	20	22.7
	Post Graduate	1	1.1
Working Experience	Below 3 yrs	6	6.8
	3-6 yrs	7	8.0
	6-9 yrs	75	85.2

Source: Field Data (2024)

From Table 4.6, 12.3% were finance, 23.9% procurement, 8% internal audit, 17.2% accounting, 29.5% information communication technology and 9.1% human resource. The study found it relevant since this are the stakeholders in charge of resource management in public universities hence better placed to address organizational resources and performance concerns.

On basis of employees' level of education most employees were at degree level 68.2%, followed by diploma 22.7%, certificate at 8% and lastly post graduate at 1.1%. Employees' level of education defined better understanding on the subject matter.

Duration that one worked in the university could determine the knowledge experience hence relevant for the study. With 85.2% majority having 6-9 year experience it confirmed understanding on the study area.

4.5 Descriptive Statistics Results

The descriptive analysis for this section included percentages, frequencies, means, and standard deviation to demonstrate the respondents' responses. The following tables display the outcomes for each variable. The participants were required to express their level of agreement about various assertions on each variable. The agreement levels ranged from 1 (strongly disagree) to 5 (strongly agree). The results are as indicated.

4.5.1 Financial Resources

This study aimed to determine the respondents' degree of agreement on six assertions regarding financial resources. The statistical study employed a Likert Scale consisting of five levels, where one (1) denoted the least favorable response and five (5) represented the most favorable answer.

Table 4. 7: Financial Resources

No	Financial Resources	S Agree	Agree	FAgree	Disagree	SDisagree	Mean	S.D
1	There is adequate disbursement of funds from the ministry of education.	21 (23.9)	39 (44.3)	22 (25)	4 (4.5)	2 (2.3)	3.82	0.98
2	Disbursement of funds is always timely which makes operations easy	18 (20.5)	56 (63.6)	0 (0)	13 (14.8)	1 (1.1)	3.03	0.61
3	There is always adequate funds for	10	46	30	2	0	3.72	1.09

No	Financial Resources	S Agree	Agree	FAgree	Disagree	SDisagree	Mean	S.D
	university activities	(11.4)	(52.3)	(34.1)	(2.3)	(0)		
4	Students capitation has been always adequate to sustain the university	12 (13.6)	46 (52.3)	0 (0)	28 (31.8)	2 (2.3)	3.77	1.01
5	There is easy access of funds to facilitate university programs	18 (20.5)	56 (63.6)	0 (0)	13 (14.8)	1 (1.1)	3.50	1.06
6	Public universities lack mechanisms to access foreign funding	21 (23.9)	39 (44.3)	22 (25)	4 (4.5)	2 (2.3)	3.31	1.15

Source: Field Data (2024)

From Table 4.7, a significant proportion thus 44.3 agreed, 23.9% strongly agreed and fairly agreed at 25% indicates that there is adequate disbursement of funds from the ministry of education, with minimal disagreement as 4.5% disagreed and 2.3% strongly disagreed. The mean score of 3.82 and standard deviation of 0.98 suggested disagreement indicating that the ministry of education fails to adequately disburse funds. While a considerable portion 20.5% strongly agreed and 63.6% agreed that disbursement of funds is always timely which makes operations easy, some respondents 14.3% disagreed as 1.1% strongly disagreed. The mean score of 3.03 and standard deviation of 0.61 suggested moderate disagreement with variability in perceptions. This affirmed that funds disbursed were not timely. This would therefore affect resources availability in public universities.

Regarding the statement that there were always adequate funds for university activities 11.4% strongly agreed, 52.3% agreed as 34.1% fairly agreed as 2.3% disagreed. The mean score of 3.72 and standard deviation of 1.09 suggest agreement with funds adequacy. While a notable proportion 13.6% strongly agreed as 52.3% agreed that student's capitation has been always adequate to sustain the university 31.8% disagreed as 2.3% strongly disagreed expressing reservations. The mean score of 3.77 and standard deviation of 1.01 suggest moderate agreement with variability in perceptions. This highlights that capitation if utilized performance would be achieved.

Majority were in agreement that there was easy access of funds to facilitate university programs where 20.5% strongly agreed as 63.6% agreed. However, 14.8% disagreed as 1.1% strongly disagreed. The mean score of 3.50 and standard deviation of 1.06 suggest strong agreement implying universities could source out financing options with ease.

A considerable portion 23.9% strongly agreed, 44.3 agreed as 25% fairly agreed that public universities lack mechanisms to access foreign funding, with minimal disagreement 4.5% who disagreed while 2.3% strongly disagreed. The mean score of 3.31 and standard deviation of 1.15 suggest strong agreement with low variability in perceptions. This indicates universities find it difficult to access foreign funding.

4.5.2 Human Resources

The researcher sought to establish the respondent's level of agreement on statements on five statements on human Resources. The pertinent results are as shown in Table 4.8.

Table 4. 8: Human Resources

No	Human Resources	Strongly Agree	Agree	Fairly Agree	Disagree	Strongly Disagree	Mean	S.D
1	The university employees are competent to perform	21 (23.8)	30 (34.1)	30 (34.1)	7 (8.0)	0 (0)	3.73	1.28

No	Human Resources	Strongly Agree	Agree	Fairly Agree	Disagree	Strongly Disagree	Mean	S.D
	their duties and responsibilities							
2	The university employees are adequate in relation to the workload in their respective departments	21 (23.9)	39 (44.3)	22 (25)	4 (4.5)	2 (2.3)	3.82	1.40
3	The university employees are well experienced in the field of practice	12 (13.6)	46 (52.3)	0 (0)	28 (31.8)	2 (2.3)	3.04	1.29
4	The university employees are always committed to work and committed to attaining the vision and mission	18 (20.5)	56 (63.6)	0 (0)	13 (14.8)	1 (1.1)	3.72	1.35
5	There is adequate staff learning capacity due to availability of training opportunities	18 (20.5)	56 (63.6)	0 (0)	13 (14.8)	1 (1.1)	3.77	1.43

Source: Field Data (2024)

The results shows that 23.8% of respondents strongly agreed as 34.1% agreed and fairly agreed respectively as 8.0% disagreed that the university employees are competent to perform their duties and responsibilities. The mean score of 3.73 and standard deviation of 1.28 suggest moderate agreement with variability in perceptions. This underscores the importance of competent employees at work.

Furthermore 23.9% strongly agreed as 44.3% agreed whereas 25% fairly agreed that the university employees are adequate in relation to the workload in their respective departments though 4.5% and 2.3% disagreed and strongly disagreed respectively. The mean score of 3.82 and standard deviation of 1.40 suggest moderate agreement with variability in perceptions. This underscores the importance of having adequate workforce.

Regarding whether the university employees are well experienced in the field of practice 13.6% strongly agreed as 52.3% agreed whereas 31.8% and 2.3% disagreed and strongly disagreed respectively. The mean score of 3.04 and standard deviation of 1.290 suggest moderate agreement with variability in perceptions. This underscores the importance of having experienced workforce.

The study ascertained whether the university employees are always committed to work and committed to attaining the vision and mission, 20.5% strongly agreed as 63.6% agreed whereas 14.8% and 1.1% disagreed and strongly disagreed respectively. The mean score of 3.72 and standard deviation of 1.35 suggest moderate agreement with variability in perceptions. This underscores the importance of having committed workforce.

The study ascertained whether there was adequate staff learning capacity due to availability of training opportunities, 20.5% strongly agreed as 63.6% agreed whereas 14.8% and 1.1% disagreed and strongly disagreed respectively. The mean score of 3.77 and standard deviation of 1.43 suggest moderate agreement with variability in perceptions. This underscores the importance of having adequate staff learning capacity.

4.5.3 Technological Resources

The sampled respondents were provided with six statements related to technological resources. The relevant results are as shown in Table 4.9.

Table 4. 9: Technological Resources

No	Technological Resources	Strongly Agree	Agree	Fairly Agree	Disagree	Strongly Disagree	Mean	S.D
1	The university staff are ICT compliant	21 (23.9)	39 (44.3)	22 (25)	4 (4.5)	2 (2.3)	3.66	1.31
2	There are technological innovations within the university	12 (13.6)	46 (52.3)	0 (0)	28 (31.8)	2 (2.3)	3.64	1.44
3	There is availability of technological facilities in the university	18 (20.5)	56 (63.6)	0 (0)	13 (14.8)	1 (1.1)	3.86	1.33
4	There is adequate ICT infrastructure in the university	10 (11.4)	46 (52.3)	30 (34.1)	2 (2.3)	0 (0)	3.80	0.98
5	The available technology is effective	12 (13.6)	46 (52.3)	0 (0)	28 (31.8)	2 (2.3)	4.20	0.95
6	The university encourages research and development programs	10 (11.4)	46 (52.3)	30 (34.1)	2 (2.3)	0 (0)	4.16	1.05

Source: Field Data (2024)

From Table 4.9, a significant portion thus 23.9% strongly agreed as 44.3% agreed whereas 25% fairly agreed that the university staff are ICT compliant as 4.5% and 2.3% disagreed and strongly disagreed respectively. The mean score of 3.66 and standard deviation of 1.31 suggest moderate agreement with variability in perceptions. This underscores the importance of employing ICT compliant staff.

Regarding whether there are technological innovations within the university 13.6% strongly agreed as 52.3% agreed whereas 31.8% and 2.3% disagreed and strongly disagreed respectively. The mean score of 3.64 and standard deviation of 1.44 suggest moderate agreement with variability in perceptions. This underscores the importance of having technological innovations in universities.

Majority were in agreement with the statement that there was availability of technological facilities in the university, where 20.5% strongly agreed and 63.6% agreed whereas 14.8% and 1.1% disagreed and strongly disagreed respectively. The mean score of 3.86 and standard deviation of 1.33 suggest moderate agreement with variability in perceptions. This underscores the importance of having technological facilities in an organization.

Regarding the statement that there were always adequate ICT infrastructure in the university 11.4% strongly agreed, 52.3% agreed as 34.1% fairly agreed as 2.3% disagreed. The mean score of 3.80 and standard deviation of 0.95 suggest disagreement with ICT infrastructure adequacy in the university. While a notable proportion 13.6% strongly agreeing as 52.3% agreed that available technology was effective 31.8% disagreed as 2.3% strongly disagreed expressing reservations. The mean score of 4.20 and standard deviation of 0.95 suggest disagreement with variability in perceptions. This highlights that thought technology was available but not much effective.

Lastly 11.4% strongly agreed, 52.3% agreed as 34.1% fairly agreed that the university encourages research and development programs as 2.3% disagreed. The mean score of 4.16 and standard deviation of 1.05 suggest agreement with its support on research and development programs.

4.5.4 Intellectual Property

This study aimed to determine the respondents' degree of agreement on five assertions pertaining to Intellectual Property. The statistical study employed a Likert Scale consisting of five levels, where one (1) denoted the least favorable response and five (5) represented the most favorable answer.

Table 4. 10: Intellectual Property

No	Intellectual Property	Strongly Agree	Agree	Fairly Agree	Disagree	Strongly Disagree	Mean	S.D
1	The university encourages innovativeness	12 (13.6)	46 (52.3)	0 (0)	28 (31.8)	2 (2.3)	3.82	1.83
2	The university encourages new patents	10 (11.4)	46 (52.3)	30 (34.1)	2 (2.3)	0 (0)	3.04	1.27
3	The university has introduced new processes and innovations	18 (20.5)	56 (63.6)	0 (0)	13 (14.8)	1 (1.1)	3.72	1.24
4	The university encourages staff to publish in peer reviewed journals	18 (20.5)	56 (63.6)	0 (0)	13 (14.8)	1 (1.1)	3.77	1.01
5	The number of publications in peer reviewed journals has increased in the past three years	12 (13.6)	46 (52.3)	0 (0)	28 (31.8)	2 (2.3)	3.72	1.11

Source: Field Data (2024)

From Table 4.10, indicates that 13.6% strongly agreed as 52.3% agreed whereas 31.8% and 2.3% disagreed and strongly disagreed respectively that the university encourages innovativeness. The mean score of 3.82 and standard deviation of 1.83 suggest moderate agreement. This explains need for innovativeness in public universities.

Majority of the respondents were in agreement with the statement that the university encourages new patents where 11.4% strongly agreed, 52.3% agreed and 34.1% fairly agreed. However, 2.3% of the respondents disagreed. The mean score of 3.04 and standard deviation of 1.27 suggest agreement.

The study examined whether the university had introduced new processes and innovations, 20.5% strongly agreed as 63.6% agreed whereas 14.8% and 1.1% disagreed and strongly disagreed respectively. The mean score of 3.72 and standard deviation of 1.24 suggest moderate agreement with variability in perceptions. This underscores the importance of innovation intellectual capacity. The university encourages staff to publish in peer reviewed journals since mean score of 3.77 and standard deviation of 1.01 suggest moderate agreement with variability in perceptions

Lastly 13.6% strongly agreed as 52.3% agreed that the number of publications in peer reviewed journals had increased in the past three years 31.8% disagreed as 2.3% strongly disagreed expressing reservations. The mean score of 3.72 and standard deviation of 1.11 suggest agreement.

4.5.5 Organization Culture

The researcher's objective was to determine the respondents' degree of agreement on eleven statements on organizational culture. The statistical study employed a Likert Scale consisting of five levels, where one (1) denoted the least favorable response and five (5) represented the most favorable answer..

Table 4.11: Organization Culture

No	Organization Culture	S Agree	Agree	FAgree	Disagree	SDisagree	Mean	S.D
1	The university adopts clear missions	21 (23.9)	39 (44.3)	22 (25)	4 (4.5)	2 (2.3)	3.90	1.24
2	The university leadership has made clear objectives we are trying to meet	18 (20.5)	56 (63.6)	0 (0)	13 (14.8)	1 (1.1)	3.98	1.62
3	The individual progress is continuously tracked against stated objectives	10 (11.4)	46 (52.3)	30 (34.1)	2 (2.3)	0 (0)	4.21	1.22
4	The university continuously has new approaches	12 (13.6)	46 (52.3)	0 (0)	28 (31.8)	2 (2.3)	3.73	1.32
5	The university leadership encourages and rewards innovation and risk taking	18 (20.5)	56 (63.6)	0 (0)	13 (14.8)	1 (1.1)	3.88	1.45
6	This university is very responsive and changes easily	21 (23.9)	39 (44.3)	22 (25)	4 (4.5)	2 (2.3)	3.41	0.95
7	Most employees are highly involved in their work	21 (23.8)	30 (34.1)	30 (34.1)	7 (8.0)	0 (0)	3.96	1.31
8	The institution instills positive attitude	21 (23.9)	39 (44.3)	22 (25)	4 (4.5)	2 (2.3)	3.89	1.09
9	Most people in the university have input into the decisions that affect them	12 (13.6)	46 (52.3)	0 (0)	28 (31.8)	2 (2.3)	3.04	1.29
10	The university has formidable values	18 (20.5)	56 (63.6)	0 (0)	13 (14.8)	1 (1.1)	3.72	1.35
11	The university’s approach to doing business is consistent and predictable	18 (20.5)	56 (63.6)	0 (0)	13 (14.8)	1 (1.1)	3.77	1.43

Source: Field Data (2024)

From Table 4.11, a clear mission that gives meaning and direction to their work, where 23.9% strongly agreed, 44.3% agreed while 25% fairly agree with minimal disagreement as 4.5% disagreed and 2.3% strongly disagreed. The mean score of 3.90 and standard deviation of 1.24 suggest agreement indicating that there was a clear mission.

On whether the university leadership had made clear objectives 20.5% strongly agreed and 63.6% agreed that there were clear objectives, some respondents 14.3% disagreed as

1.1% strongly disagreed. The mean score of 3.98 and standard deviation of 1.62 suggest moderate agreement with variability in perceptions. This affirms that clear objectives were in place.

The study revealed that 11.4% strongly agreed, 52.3% agreed as 34.1% fairly agreed that the individual progress was continuously tracked against stated objectives as 2.3% disagreed. The mean score of 3.98 and standard deviation of 1.62 suggest agreement with the statement.

Furthermore 13.6% strongly agreed as 52.3% agreed that the university continuously adopted new and improved ways to do work 31.8% disagreed as 2.3% strongly disagreed expressing reservations. The mean score of 3.73 and standard deviation of 1.32 suggest moderate agreement for new ways being adopted at work.

Regarding the statement that the university leadership encourages and rewards innovation and risk taking 20.5% strongly agreed, 63.6% agreed, with a disagreement of 14.8% and 1.1% strongly disagreed. The mean score of 3.88 and standard deviation of 1.45 suggest strong agreement implying universities rewarded performers.

A considerable portion 23.9% strongly agreed, 44.3 agreed as 25% fairly agreed that there university was very responsive and made changes easily, with minimal disagreement 4.5% who disagreed while 2.3% strongly disagreed. The mean score of 3.41 and standard deviation of 0.95 suggest strong disagreement with low variability in perceptions. This indicates universities need to be responsive to changes.

The results shows that 23.8% of respondents strongly agreed as 34.1% agreed and fairly agreed respectively as 8.0% disagreed that most employees are highly involved in their work. The mean score of 3.96 and standard deviation of 1.31 suggest moderate agreement with variability in perceptions. This underscores the importance of making employees value their work.

Furthermore 23.9% strongly agreed as 44.3% agreed whereas 25% fairly agreed that everyone in this university believed that he or she can have a positive impact though 4.5% and 2.3% disagreed and strongly disagreed respectively. The mean score of 3.89 and standard deviation of 1.09 suggest moderate agreement with variability in perceptions.

Regarding whether most people in the university had input into the decisions that affect them 13.6% strongly agreed as 52.3% agreed whereas 31.8% and 2.3% disagreed and strongly disagreed respectively. The mean score of 3.04 and standard deviation of 1.29 suggest moderate agreement with variability in perceptions. The study ascertained whether the university had a clear and consistent set of values that governs the way business was done, 20.5% strongly agreed as 63.6% agreed whereas 14.8% and 1.1% disagreed and strongly disagreed respectively. The mean score of 3.72 and standard deviation of 1.35 suggest moderate agreement.

Lastly the study ascertained whether the university’s approach to doing business was consistent and predictable, 20.5% strongly agreed as 63.6% agreed whereas 14.8% and 1.1% disagreed and strongly disagreed respectively. The mean score of 3.77 and standard deviation of 1.43 suggest moderate agreement implying that universities core mission was well advanced.

4.5.6 Performance of Public Universities

Performance of Public Universities in Western region Kenya was ascertained through a number of questions. This is as shown in Table 4.12

Table 4.12: Performance

No	Performance	Strongly Agree	Agree	Fairly Agree	Disagree	Strongly Disagree	Mean	S.D
1	The amount of revenue from grants generated by the university has increased in the past three years	10 (11.4)	46 (52.3)	30 (34.1)	2 (2.3)	0 (0)	4.22	0.80
2	The number of students enrolled has increased in the past three years	18 (20.5)	56 (63.6)	0 (0)	13 (14.8)	1 (1.1)	3.89	1.21
3	The university ranking has improved in the past three years	12 (13.6)	46 (52.3)	0 (0)	28 (31.8)	2 (2.3)	3.85	1.18
4	The university employee satisfaction and morale has improved in the past three years	21 (23.9)	39 (44.3)	22 (25)	4 (4.5)	2 (2.3)	3.54	1.27

Source: Field Data (2024)

From Table 4.12, a substantial portion, comprising 11.4%, who strongly agreed and 52.3% and 34.1% who agreed and fairly agreed respectively that the amount of revenue from grants generated by the university had increased the previous three years though 2.3% disagreed, as reflected in the relatively high mean score of 4.22 and a standard deviation of 0.80, suggesting a moderate level of agreement.

Similarly, regarding on whether the number of students enrolled had increased in the previous three years, respondents exhibited mixed responses. While 20.5% strongly agreed and 63.6% agreed, though 14.8% disagreed as 1.1% strong disagreement. This variation is reflected in the mean score of 3.89, with a relatively high standard deviation of 1.21, indicating a moderate level of agreement.

Regarding on whether the university ranking has improved in the past three years, respondents exhibited mixed responses. While 13.6% strongly agreed and 52.3% agreed, a notable proportion 31.3% disagreed as 2.3% strongly disagreed. This variation is reflected in the mean score of 3.85, with a relatively high standard deviation of 1.18, indicating a wider range of opinions among respondents.

Regarding on whether the university employee satisfaction and morale has improved in the past three years, respondents exhibited mixed responses. While 23.9% strongly agreed and 44.3% agreed, a notable proportion 25% fairly agreed though 4.5% disagreed as 2.3% strong disagreement. This variation is reflected in the mean score of 3.54, with a relatively high standard deviation of 1.27, indicating a wider range of opinions among respondents.

4.6 Assumption of Linear Regression

This study used linear regression based on the normality and multi-collinearity tests. The outcomes are detailed below.

4.6.1 Normality

The tests of normality, specifically the Kolmogorov-Smirnov and Shapiro-Wilk tests, assess whether the distribution of data for each variable follows a normal distribution. Normality is an assumption often required for certain statistical analyses.

Table 4. 13: Kolmogorov-Smirnov and Shapiro-Wilk

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	**df**	**Sig.**	**Statistic**	**df**	**Sig.**
Financial resources	.110	88	.010	.953	88	.003
Human resources	.142	88	.000	.945	88	.001
Technological resources	.132	88	.001	.952	88	.003
Intellectual property	.166	88	.000	.957	88	.005
Organization culture	.152	88	.000	.945	88	.001
Performance	.162	88	.000	.891	88	.000

a. Lilliefors Significance Correction

Source: Field Data (2024)

Both the Kolmogorov-Smirnov and Shapiro-Wilk tests resulted in statistically significant values ($p < .05$), indicating that the data significantly deviate from a normal distribution. This led to further examination through plots (Ghasemi & Zahedias, 2012). Appendix III Q-Q plots shows there was no statistically significant departure from the line of fit. Because of this near-normal distribution, parametric tests like linear regression were applicable to the data.

4.6.2 Multi-Collinearity Test

Multi-collinearity impedes the ability to precisely characterize variables because of their interaction. According to Kothari (2014) a critical value rule of thumb of VIF=10 and tolerance less than 1 to assess the presence of excessive correlation. Table 4.14 shows that all of the VIF (Variance Inflation Factor) values are less than 10, indicating that the research variables are not subject to multi-collinearity.

Table 4. 14: Multi-Collinearity

Model		Collinearity Statistics	
		Tolerance	VIF
1	Financial resources	.500	1.999
	Human resources	.569	1.758
	Technological resources	.588	1.702
	Intellectual property	.628	1.593
	Organization culture	.416	2.402

a. Dependent Variable: Performance

Source: Field Data (2024)

Data shows that all the tolerance values were less than 1 and all variance inflation factor values were less than 10 implications that data was normal.

4.7 Pearson Correlation Results

Table 4.15 shows the correlation coefficient (r) values obtained by means of Pearson correlation study. This technique determines the direction (positive or negative) and magnitude (-1 to +1) of the correlation between two ratio/scale or continuous variables.

Table 4. 15: Multiple Correlation Matrix

		Financial resources	Human resources	Technological resources	Intellectual property	Performance
Financial resources	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	88				
Human resources	Pearson Correlation	.366**	1			
	Sig. (2-tailed)	.000				
	N	88	88			
Technological resources	Pearson Correlation	.561*	.554**	1		
	Sig. (2-tailed)	.014	.000			
	N	88	88	88		
Intellectual property	Pearson Correlation	.349**	.509**	.438**	1	
	Sig. (2-tailed)	.001	.000	.000		
	N	88	88	88	88	

Performance	Pearson Correlation	.710**	.563**	.572**	.712**	1
	Sig. (2-tailed)	.006	.000	.000	.000	
	N	88	88	88	88	88

Source: Field Data (2024)

The data presented in Table 4.15 indicates a significant positive correlation (R=0.710, p<0.05) between financial resources and performance. The correlation coefficient is 0.710, and the p-value is below 0.05, specifically 0.006, suggesting statistical significance with a 95% confidence level. Hence, an augmentation in financial resources will lead to a commensurate enhancement in the performance of public universities. These findings align with the research conducted by Ochola, Nyamita, and Okello (2022) on the impact of financial resources on the performance of devolved administrations in Kenya. Financial resources had a big impact on how well Kenya's decentralized government performed.

The p-value of 0.000 corresponds to the correlation coefficient of 0.563 calculated for human resources. Results indicate that the performance of public universities in the western area of Kenya was significantly influenced by their reliance on human resources. This study concurs with the findings of Al-Khaled and Al-Khaled, Sultan and Chung, Jee Fenn (2020), who concluded that organizations that implemented strategic human resource management practices (SHRMPs) demonstrated a sustainable ability to achieve their objectives and thrive in their specific sectors.

More precisely, a correlation coefficient of 0.572 suggests a robust and positive link between the technological resources and the performance of public universities in the western area of Kenya. The results align with the assessment conducted by Revenio and Nasra (2017) investigating the effects of information technology on the organizational performance of the International College of Engineering and Management. The findings confirmed a direct and substantial correlation between the use of information technology and the performance of the company. Moreover, a robust and favorable association exists between the intellectual property and performance of public universities, which is supported by a correlation coefficient of 0.712 and a p-value of 0.000. The findings are consistent with the study conducted by Murimi, Ombaka, and Muchiri (2019) on the impact of strategic physical resources on the performance of small and medium-sized manufacturing companies in Kenya. Their research also revealed the critical role of intellectual property.

4.8 Simple Linear Regression

4.8.1 Influence of Financial resources on Performance of Public Universities in Western Region

The primary objective of the investigation was to determine the influence of financial resources on performance of Public Universities in Western Region, Kenya. One variable's ability to explain the variance in predicting another variable was investigated using regression analysis. The purpose of the regression study was to find out how well the independent variable (Financial resources) could predict the dependent variable (Performance). Table 4.16 displays the results of the analysis.

Table 4. 16: Regression Results of Financial resources and Performance

Model Summary[a]									
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	.710[a]	.504	.459	.60371	.506	88.181	1	86	.000

a. Predictors: (Constant), Financial resources

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	32.139	1	32.139	88.181	.006[b]
	Residual	31.344	86	.364		
	Total	63.482	87			

a. Dependent Variable: Performance
b. Predictors: (Constant), Financial resources

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.139	.505		4.240	.000
	Financial resources	.371	.131	.292	2.835	.006

Source: Field Data (2024)

The R^2 of 0.504 in Table 4.16 above indicates that performance of Public Universities in Western Region, Kenya is influenced by financial resources to the tune of 50.4%. As indicated by F (1,86) =88.181, P 0.006<0.05. This suggests that among Public Universities in Western Region, financial resources are a useful predictor of performance. Here is the basic linear regression equation:

$$Y=2.139+0.371\ X_1$$

At a significance threshold of P<0.05, the unstandardized regression coefficient for financial resources was 0.371. This indicates that there will be a significant increase in the performance of public universities in the Western area by 0.371 units in the same direction for each one unit change in financial resources. The findings presented here are consistent with the conclusions obtained by Rubasin and Nuradhi (2021) who affirmed that there was a strong and statistically significant relationship between financial resources and financial performance. Similarly, Kiswili (2021) and Ochola, Nyamita and Okello (2022) established that financial resources impacted on the performance of saccos and devolved governments respectively in Kenya. On the same vein Kithusi (2015) and Wanyama (2020) found that organizational resources influenced performance.

4.8.2 Influence of Human resources on Performance

The study's second purpose was to examine the influence of human resources on performance of Public Universities in Western Region, Kenya. This objective aimed to examine the second null hypothesis, $H0_2$: Human resources do not have a significant influence on performance of Public Universities in Western Region, Kenya. A regression analysis was performed to determine the extent to which the dependent variable (Performance) may be predicted by the independent variable (Human Resources). The analytical findings displayed in Table 4.17.

Table 4. 17: Regression Results of Human resources

Model Summary

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	.563[a]	.317	.309	.71017	.317	39.873	1	86	.000

a. Predictors: (Constant), Human resources

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	20.109	1	20.109	39.873	.000[b]
	Residual	43.373	86	.504		
	Total	63.482	87			

a. Dependent Variable: Performance

b. Predictors: (Constant), Human resources

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.666	.463		1.438	.154
	Human resources	.789	.125	.563	6.314	.000

a. Dependent Variable: Performance

Source: Field Data (2024)

Table 4.17 shows that the R-squared value was 0.317, which means that the performance of Public Universities in Western Region, Kenya is influenced by human resources to portion of 31.7% of the variation in performance of Public Universities in Western Region. The model is significant at the 95.0% confidence level, as shown by the ANOVA result, which has a value of F (1,86) =39.873, P 0.00<0.05. Here, we postulate that the degree to which human resources influences performance of Public Universities in Western Region. Here is the basic linear regression equation:

$$Y=0.666+0.789X_2$$

With a significance level of P 0.00<0.05, the unstandardized regression coefficient value for human resources was 0.789. For each one-unit change in human resources there would be a 0.789 change in performance. Thus human resources has a positive and significant influence on performance. The study rejects the null hypothesis that Human resources have no significant influence on performance of Public Universities in Western Region, Kenya. The study agrees with Ruga, Kiruja and Sagwa, (2022) who examined the influence of strategic human resource management practices on Performance of Public Universities in Kenya. Naitore and Wanyoike (2019), established that there was a positive and significant relationship linking strategic human resource management practices, in terms of HR planning and staffing and the performance of selected Public Universities in Kenya. The findings of this study agrees with Eneh and Awara (2016),Vivares, Sarache and Naranjo (2016) and Odhon'g and Omolo (2015) who found that Human Resources has a positive and significant influence on Performance. The findings deviates from those of Mwai, Namada and Katuse (2018) who established that staff empowerment had a positive and insignificant influence on the realization of organizational goals.

4.8.3 Technological resources and Performance

The study's third goal was to ascertain the influence of technological resources on performance of Public Universities in Western Region, Kenya. The null hypothesis, which posits that $H0_3$: Technological resources does not significantly influence performance of Public Universities in Western Region, Kenya. A regression analysis was conducted to ascertain the degree to which the independent variable (technological resources) could predict the dependent variable (performance). The results of the analysis are presented in Table 4.18.

Table 4. 18: Regression Results of Technological resources

Model Summary

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	.572[a]	.327	.319	.70492	.327	41.753	1	86	.000

a. Predictors: (Constant), Technological resources

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	20.748	1	20.748	41.753	.000[b]
	Residual	42.734	86	.497		
	Total	63.482	87			

a. Dependent Variable: Performance

b. Predictors: (Constant), Technological resources

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.565	.468		1.207	.231
	Technological resources	.835	.129	.572	6.462	.000

a. Dependent Variable: Performance

Source: Field Data (2024)

The Table 4.18 indicates that the R square value was 0.327, which signifies that technological resources accounts for 32.7% of the variation in performance of Public Universities in Western Region, Kenya. The ANOVA table demonstrates that the model is significant at 95% confidence level ($F (1, 86) = 41.753$, $P\ 0.000<0.05$), indicating that it is viable. This suggests that the level of technological resources is a valuable indicator of performance of Public Universities in Western Region, Kenya. The equation for basic linear regression is displayed below. $Y=0.565+0.835X_3$

At a significance threshold of $P\ 0.000<0.05$, the technological resources unstandardized regression coefficient value was 0.835. This showed that there would be a substantial shift of 0.835 in the performance for every one unit change in technological resources.

Research conducted by Keitany, Chepkilot, and Tanui (2019) examined the impact of technological innovation on the competitiveness of universities in Nakuru Town, Kenya. The research findings indicated a strong and statistically significant correlation between online teaching and the use of smart boards with the competitiveness of colleges. The present study's results are consistent with the findings of Revenio and Nasra (2017), Wahu and Assumptah (2017), and Makungu and Ndungu (2016), which indicate a favorable and substantial impact of Technological Resources on Performance.

This study challenges the findings of Masai (2017) who conducted a descriptive survey to investigate the impact of IT on service delivery at public institutions in Kenya, particularly at Kenyatta University. Masai (2017) concluded that IT had no significant significance. Although the findings were restricted to Kenyatta University, this study undertook a comprehensive examination of the impact of technical resources on the performance of public universities in the Western area of Kenya.

4.8.4 Intellectual property and Performance

The fourth objective of the study was to assess the influence of intellectual property on performance of Public Universities in Western Region, Kenya. The objective of this study was to investigate the fourth null hypothesis, $H0_4$, which posits that intellectual property does not significantly influence performance of Public Universities in Western Region, Kenya. A regression analysis was conducted to ascertain the degree to which the independent variable (intellectual property) can predict the dependent variable (performance). The results of the analysis are presented in Table 4.19.

Table 4. 19: Regression Results of Intellectual property and Performance

Model Summary									
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	.712[a]	.506	.501	.60371	.506	88.181	1	86	.000
a. Predictors: (Constant), Intellectual property									

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	32.139	1	32.139	88.181	.000[b]
	Residual	31.344	86	.364		
	Total	63.482	87			
a. Dependent Variable: Performance						
b. Predictors: (Constant), Intellectual property						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.732	.566		-3.060	.003
	Intellectual property	1.459	.155	.712	9.390	.000
a. Dependent Variable: Performance						

Source: Field Data (2024)

According to Table 4.19, the R square value was 0.506, indicating that intellectual property significantly explains up to 50.6% of the variation in performance of Public Universities in Western Region, Kenya. The model is significant at the 95% confidence level, as shown by the significance value of F (1,86)= 88.181 and the fact that P0.000<0.05, as obtained from the ANOVA result. This hypothesis suggests that intellectual property is a valuable indicator of performance of Public Universities in Western Region, Kenya. The equation for basic linear regression is displayed below.

$$Y=-1.732+1.459X_4$$

The unstandardized regression coefficient value of intellectual property was evaluated to be 1.459 at a significance level of 0.05. Such findings indicate that a one-unit increase in intellectual property would result in a significant 1.459-unit increase in the performance of Public Universities in the Western Region of Kenya. This aligns with the findings of Kageni (2021), who investigated the impact of strategic organizational resources on the performance of deposit taking social cooperative organizations (Saccos) in Kiambu County, Kenya. Hence, the study determined that intellectual property exerted a substantial impact on the performance of DTS in Kiambu County. Further, it aligns with the findings of Camfield, Giacomello, and Sellitto (2018) who aimed to evaluate the significance of intellectual capital and its influence on the performance of Brazilian firms. The present study's results are consistent with the findings of Murimi, Ombaka, and Muchiri (2019), Olthaar and Noseleit (2017), and Nwachukwu and Chladkova (2019), which indicate a favorable and substantial impact of Intellectual Property on Performance.

4.9 Multiple Regression Analysis

This study aimed to examine the organizational resources that influence performance of Public Universities in Western Region. This was achieved by multiple regression analysis. The study aimed to assess the influence of each organizational resources on performance of Public Universities in Western Region when all of these resources were considered together in the model. The findings of the multiple linear regression analysis are described in Table 4.20.

Table 4. 20: Multiple Regressions

Model Summary

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	.778[a]	.605	.586	.54977	.605	31.759	4	83	.000

a. Predictors: (Constant), Intellectual property, Financial resources, Technological resources, Human resources

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	38.396	4	9.599	31.759	.000[b]
	Residual	25.086	83	.302		
	Total	63.482	87			

a. Dependent Variable: Performance

b. Predictors: (Constant), Intellectual property, Financial resources, Technological resources, Human resources

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.420	.557		4.345	.000
	Financial resources	.220	.096	.216	2.212	.033
	Human resources	.223	.127	.259	2.761	.002
	Technological resources	.378	.124	.259	3.047	.003
	Intellectual property	1.072	.172	.523	6.245	.000

a. Dependent Variable: Performance

Source: Field Data (2024)

The comprehensive summary of the model can be seen in Table 4.20. The analysis of the R square column indicates that four organizational resources accounted for 60.5% of the overall variation in performance of public universities in the Western region (R square =.605, P = 0.000). This finding suggests that 39.5% of the variability in organizational resources among public universities in the Western region of Kenya can be ascribed to characteristics that are not considered in this research model. In this study, the F Ratio was employed to evaluate the significance of the model, particularly its capacity to predict the organizational resources with greater precision compared to the mean score, which is considered a less precise estimate. The F statistic exceeds one, as indicated by a value of 31.759. These findings indicate that the enhancement resulting from model fitting is far more than the errors or inaccuracies that were not included in the model (F (4,83) = 39.841, P=0.000). These findings suggest that the final study model has achieved substantial advancements in precisely predicting the organizational resources in Public Universities in the Western Region of Kenya. These findings align with the study conducted by Murimi, Ombaka, and Muchiri (2019) on the impact of strategic physical resources on performance.

The multiple linear regression model was availed as below

4.10 Hierarchical regression analysis

The study aimed to determine the influence of organization culture on the relationship between organizational resources and performance of Public Universities in Western Region in Kenya. The study employed the null hypothesis, which states that Organizational resources have no moderating effect on the relationship between organizational resources and performance of Public Universities in Western Region in Kenya.

This was tested by employing a hierarchical regression analysis, where the moderating variable was the organization culture.

To calculate the moderating effect the following equation was utilized:

Ultimately, a regression analysis was conducted to evaluate the relevance, direction, and magnitude of the relationship between the betas. Throughout the process, the researcher monitored the fluctuations of the R-squared. Table 4.21 presents a concise overview of the relevant discoveries.

Table 4.21: Hierarchical Regression

Model	R	R Square	Adjusted R Square	Std. Er the Estimate	Change Statistics		
					R Sq Change	F Change	Sig. F Change
1	.778[a]	.605	.586	.54977		31.759	.000
2	.787[b]	.619	.595	.54339	.014	2.960	.006
3	.822[c]	.675	.661	.52864	.056	8.764	.004

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	38.396	4	9.599	31.759	.000[b]
	Residual	25.086	83	.302		
	Total	63.482	87			
2	Regression	39.270	5	7.854	26.600	.000[b]
	Residual	24.212	82	.295		
	Total	63.482	87			
3	Regression	40.270	6	7.877	27.601	.000[c]
	Residual	25.211	81	.296		
	Total	64.481	87			

Coefficients

1	(Constant)	2.420	.557		4.345	.000
	Financial resources	.020	.096	.016	.212	.033
	Human resources	.223	.127	.159	1.761	.002
	Technological resources	.378	.124	.259	3.047	.003
	Intellectual property	1.072	.172	.523	6.245	.000
2	(Constant)	1.911	.599		3.200	.002
	Financial resources	.112	.122	.088	.917	.002
	Human resources	.191	.125	.137	1.510	.035
	Technological resources	.452	.129	.309	3.478	.001
	Intellectual property	1.156	.177	.564	6.548	.000
	Organization culture(OC)	.369	.209	.182	1.721	.009
3	(Constant)	1.967	.610		3.224	.002
	Financial resources	.112	.120	.093	.917	.032
	Human resources	.191	.122	.139	1.510	.035
	Technological resources	.452	.130	.441	3.478	.001
	Intellectual property	.967	.510	.612	2.224	.002
	Organization culture	.159	.173	.562	2.549	.000

Financial resources*OC	.369	.214	.251	1.721	.007
Human resources*OC	.020	.096	.219	.212	.033
Technological resources*OC	.223	.127	.258	1.761	.002
Intellectual property*OC	.378	.124	.458	3.047	.003

1. Predictors: (Constant), Financial resources, Human resources, Technological resources, Intellectual property
2. Predictors: (Constant), Financial resources, Human resources, Technological resources, Intellectual property & organization culture
3. Predictors: (Constant), Financial resources*organization culture, Human resources* organization culture, Technological resources*organization culture, Intellectual property*organization culture

Source: Field Data (2024)

Table 4.21 shows Hierarchical regression results to establish the moderating effect of organization culture on the relationship between organization resources and performance of Public Universities in Western Region in Kenya. The increase in R^2 change by 0.014 from model 1 to model and later 0.056 from model 2 to 3 implies that upon addition of organization culture there was a growth trend and lastly on addition of interaction term it further increased. Analysis of variance shows that all models even upon addition of organization culture the p value remained 0.000 hence less than 0.05 implications that all the three models are feasible.

Regarding the interaction term the findings revealed that organization culture had a positive and significant moderating effect on the relationship between financial resources and performance (B=0.369, p=0.07). Regarding the interaction term the findings revealed that organization culture had a positive and significant moderating effect on the relationship between human resources and performance (B=0.20, p=0.33). Regarding the interaction term the findings revealed that organization culture had a positive and significant moderating effect on the relationship between technological resources and performance (B=0.223, p=0.02). Regarding the interaction term the findings revealed that organization culture had a positive and significant moderating effect on the relationship between intellectual property and performance (B=0.378, p=0.03).

The model will thus be:

All other factors being held constant, a unit change in interaction between financial resources and organization culture leads to increase of 0.369 in performance and it is significant. A unit change in interaction between human resources and organization culture leads to increase of 0.020 in performance and it is significant. A unit change in interaction between technological resources and organization culture leads to increase of 0.223 in performance and it is significant. A unit change in interaction between intellectual property and organization culture leads to increase of 0.378 in performance and it is significant. Thus the null hypothesis that Organization Culture has no moderating significant influence on the relationship between organizational resources and performance of Public Universities in Western Region, Kenya is therefore rejected.

The study agrees with Rizal, Hartanto, Muthofa, and Suharmanto (2020) who examined the effect of moderation of Organization Culture on the relationships on job satisfaction and work motivation towards employee performance. The study by Asikhia *et al.* (2022) investigated the moderating effect of Organization Culture on the relationship between green human resource management and competitive advantage. Mande, Awiti, Imbambi, and Aketch, (2019) in a study on the moderating influence of organization culture in the relationship between workforce diversity and employee performance in public universities in western Kenya concluded that organization culture is a critical component in moderating the relationship between workforce diversity and employee performance. It disagrees with Waithaka, (2023) who conducted a study on the moderation effect of Organization Culture on the relationship between strategic inputs of competitive intelligence and the competitive of advantage among commercial banks in Kenya. However the study difference could be attributed to sectoral difference banks and universities.

Table 4. 22: Hypothesis Results

Hypothesis	**Findings**	**Decision and basis**
HO_1: Financial resources have no significant influence on performance of Public Universities in Western Region, Kenya.	Financial resources have a significant positive effect on performance of Public Universities in Western Region, Kenya	Reject 0.006<0.05
HO_2: Human resources have no significant influence on performance of Public Universities in Western Region, Kenya	Human resource has a significant positive effect on performance of Public Universities in Western Region, Kenya	Reject 0.000<0.05
HO_3: Technological resources have no significant influence on performance of Public Universities in Western Region, Kenya.	Technological Resources have a significant positive effect on performance of Public Universities in Western Region, Kenya	Reject 0.000<0.05
HO_4: Intellectual Property has no significant influence on performance of Public Universities in Western Region, Kenya	Intellectual Property has a significant positive effect on performance of Public Universities in Western Region, Kenya	Reject 0.000<0.05
HO_5: Organization Culture has no moderating significant influence on the relationship between organizational resources and performance of Public Universities in Western Region, Kenya	Organization Culture has a significant positive moderating effect on the relationship between organization resources and performance of Public Universities in Western Region, Kenya	Reject 0.000<0.05

Source: Field Data (2024)

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provided a concise overview of the study's findings, conclusions, recommendations, and suggestions for further research. This was guided by the study variables.

5.2 Summary of the Findings

A primary aim of this study was to determine the impact of organizational resources on the performance of Public Universities in the Western Region of Kenya. The major objectives of this study were to examine the influence of financial resources on performance, assess the influence of human resources on performance, measure the influence of technological resources on performance, assess the influence of intellectual property on performance, and explore how Organization Culture moderates the relationship between organizational resources and performance in Public Universities in the Western Region of Kenya. An analysis of the independent and combined effects was performed using statistical tests at a confidence level of 95 percent In following sections, the researcher provides a concise overview of the obtained results regarding descriptive data, correlation analysis, and the assessment of the presence of a positive and statistically significant influence of the independent variable constructs and the moderating variable on the dependent variable.

5.2.1 Financial resources on performance

The descriptive findings on Financial Resources indicate that the majority of respondents agreed with the statements regarding the sufficient disbursement of funds from the ministry of education, the consistent adequacy of students' capitation to support the university, and the available funds for university activities. Results of the correlation analysis indicate a strong positive relationship between financial resources and performance The coefficient is 0.710, and the p value is below the significance level of 0.05, namely 0.006, reflecting statistical significance at a 95% confidence level. The R-squared score of 0.504 quantifies a 50.4% level of effect. Financial resources exert a strong and statistically significant impact on the performance of public universities in the western area of Kenya.

5.2.2 Human resources on performance

The descriptive findings on Human Resources indicate that the majority of respondents agreed with the statements that the university personnel were sufficient in terms of workload in their departments, that there was sufficient staff learning capacity due to the availability of training opportunities, and that the university employees were competent in carrying out their assigned duties and responsibilities.

Results of the correlation analysis indicate a significant positive relationship between Human resources and performance The coefficient is 0.563, and the p value is 0.000, which is below the threshold of 0.05, suggesting statistical significance at a 95% confidence level. The R-squared score of 0.317 quantifies a 31.7% level of effect. Human Resources exerts a strong and statistically significant impact on the performance of public universities in the western area of Kenya.

5.2.3 Technological resources on performance

Concerning the descriptive findings on Technological Resources, the majority of respondents agreed with the assertions that the existing technology was efficient, the university promoted research and development initiatives, and there were technological facilities available at the institution.

The obtained correlations indicate a significant positive relationship between Technological Resources and performance The coefficient is 0.572, and the p value is 0.000, which is below the threshold of 0.05, suggesting statistical significance at a 95% confidence level. The R-squared score of 0.327 quantifies a 32.7% level of effect. Technological resources exert a strong and statistically significant impact on the performance of public universities in the western region of Kenya.

5.2.4 Intellectual property on performance

The descriptive findings on Intellectual Property indicate that the majority of respondents agreed with the statements that the university promotes innovativeness, encourages staff to publish in peer reviewed journals, and that the number of publications in peer reviewed journals has risen in the last three years. The correlations analysis reveal a significant positive relationship between Intellectual Property and performance An analysis of Intellectual Property revealed a correlation coefficient of 0.712 and a p-value of 0.000. A coefficient of determination (R-squared) of 0.506 suggests that intellectual property accounts for up to 50.6% of the variability in performance. Intellectual Property exerts a strong and statistically significant impact on the performance of public universities in the western area of Kenya.

5.2.5 Organization Culture

Regarding the descriptive findings on Organization Culture, the majority of respondents agreed with the statements that individual progress was consistently monitored against prescribed goals, the university leadership had established explicit objectives they were striving to achieve, and the majority of employees were actively engaged in their work. Analysis reveals that 44.3% of respondents expressed agreement on the presence of a well-defined mission at the university. The average score of 3.90 and standard deviation of 1.24 reflect a high level of agreement, indicating the existence of a clear objective. An analysis of variance indicates that even after including organisation culture, all models maintained a p value of 0.0, which is below the significance level of 0.05. This suggests that organisation culture has a statistically significant positive moderating effect on the relationship between organisational resources and performance of Public Universities in the Western Region of Kenya. The rise in R^2 by 0.014 from model 1 to model 2, and subsequently by 0.056 from model 2 to 3, indicates that the inclusion of organisational culture resulted in a growing trend. Furthermore, the inclusion of the interaction term further contributed to the upward trend.

Regarding the interaction term the findings revealed that organization culture had a positive and significant moderating effect on the relationship between financial resources and performance . Regarding the interaction term the findings revealed that organization culture had a positive and significant moderating effect on the relationship between human resources and performance . Regarding the interaction term the findings revealed that organization culture had a positive and significant moderating effect on the relationship between technological resources and performance Regarding the interaction term the findings revealed that organization culture had a positive and significant moderating effect on the relationship between intellectual property and performance .

5.3 Conclusion

This study examined the influence of financial resources on the performance of Public Universities in the Western Region of Kenya. The performance of Public Universities in the Western Region of Kenya was positively and significantly influenced by financial resources. The findings agreed with the resource based view that financial resources are a core aspect and as such it is inherent for firms to ensure they have adequate financial resources.

This study concludes that Human resources has a positive and significant influence on performance of Public Universities in the Western Region of Kenya. The study contributes to knowledge in the area of Human Resource Management as it envisages how an organizations Human Resource can boost its performance. These results concur with proponents of RBT (Wernerfelt, 1984;Barney 1986) that resource possession influences performance.

This study investigated the influence of technical resources on the performance of Public Universities in the Western Region of Kenya. The performance of Public Universities in the Western Region of Kenya was positively and significantly influenced by technological infrastructure. The findings agreed with the resource based view that technological resources are a core aspect and as such it is inherent for firms to ensure they have adequate technological resources. The study evaluated the influence of intellectual property on the performance of Public Universities in the Western Region of Kenya revealed a favourable and statistically significant affect.

The present study aimed to assess the moderating effect of organisational culture on the association between resource allocation and performance within Public Universities located in the Western Region of Kenya. Regarding the interaction term the findings revealed that organization culture had a positive and significant moderating effect on the relationship between financial resources and performance). Regarding the interaction term the findings revealed that organization culture had a positive and significant moderating effect on the relationship between human resources and performance Regarding the interaction term the findings revealed that organization culture had a positive and significant moderating effect on the relationship between technological resources and performance. Regarding the interaction term the findings revealed that organization culture had a positive and significant moderating effect on the relationship between intellectual property and performance. In the Western Region of Kenya, the relationship between organizational resources and performance of Public Universities was positively and significantly influenced by the organizational culture.

5.4 Recommendations

In regards to Financial Resources the study recommends for the Ministry of Education to ensure timely and adequate disbursement of funds for facilitating universities programs and operations. Public universities ought to generate their own financial resources and reduce reliance on exchequer. Furthermore accessibility of funds should be sought by universities at all costs to enable performance in respective public universities. In regards to Human Resources Managerial practitioners in public universities can consider strengthening their human resource for stellar performance. The study recommends that public universities should always employ competent staff for effective productivity. Furthermore staff should have adequate experience and always be committed to work. Universities should also make training opportunities available to ensure adequate staff learning capacity. In regards to Technological Resources the study recommends adoption of information technology knowledgeable employees and further improves their skills through training. Universities should advocate for innovations and even encourage research and development initiatives. The study recommends provision of adequate information technology gadgets for use.

In regards to Intellectual Property the study recommends that the universities should invest in research publications in peer reviewed journals. The university can further initiate new innovative processes, new patents and copyright trends. In regards to Organization Culture the study advocates that public universities should have a clear mission and objectives based on resources maximization that would see universities output increased. This would make learning in universities attainable at all times.

5.5 Suggestion for Further Research

Based on the scope of this study and limitations, the following suggestions are made for further research: A study between organization resources and performance of public universities in other regions rather than western region, Kenya, equally on private universities, other learning institutions such as colleges. Secondly similar study introducing moderator such as organizational factors would be ideal. Thirdly, a similar study using other ways of collecting data for example interview and even secondary data would be ideal. Finally, a study on other organizations in sectors such as banking sector, manufacturing sector, transport sector or health sector would work well.

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APPENDICES

APPENDIX I: INTRODUCTORY LETTER

Dear Respondent,

This is to inform you that I am undertaking a research study leading to a master's of Business Administration degree in Strategic Management in Masinde Muliro University of Science and Technology. The study focuses on the influence of organizational resources on performance of Public Universities in Western Region, Kenya. Please take some time to complete this questionnaire. Your accurate and frank response will be highly appreciated. You do not need to write your name on the questionnaire. All information received will be treated with confidentiality. The findings of this study will be used only for research purposes.

Thank you for your cooperation.

Mudi Titus Ingosi

Tel: 0725237730

APPENDIX II: QUESTIONNAIRE

SECTION A: Demographic Information

1. Please indicate your job category (tick where appropriate)

Finance ☐ Procurement ☐ Internal Audit ☐ Accounting ☐ HR ☐ CT ☐

2. Highest level of Education that you have completed

Diploma ☐ Undergraduate ☐ Masters ☐ PhD ☐ Others ☐

(Please explain)………..

3. How long have you been working with the university (tick where applicable)

Less than 3 years ☐ 3-6 years ☐ 6-9 years ☐ above 9 years ☐

SECTION B: Organizational Resources

PART 1: Financial Resources

On a scale of 1-5 rank following Financial Resources aspects where 5- strongly agree (**SA**), 4-agree (**A**), 3-fairly agree (**FA**), 2-disagree (**D**), 1-strongly disagree (**SD**)

S/ No.	**Statements on Financial Resources**	**5**	**4**	**3**	**2**	**1**
1	There is adequate disbursement of funds from the ministry of education.					

2	Disbursement of funds is always timely which makes operations easy					
3	There is always adequate funds for university activities					
4	Students capitation has been always adequate to sustain the university					
5	There is easy access of funds to facilitate university programs					
6	Public universities lack mechanisms to access foreign funding					

PART II: Human Resources

On a scale of 1-5 rank the following Human Resources aspects where 5- strongly agree (**SA**), 4-agree (**A**), 3-fairly agree **(FA)**, 2-disagree (**D**), 1-strongly disagree (**SD**)

S/ No.	**Statements on Human Resources**	**5**	**4**	**3**	**2**	**1**
1	The university employees are competent to perform their duties and responsibilities					

2	The university employees are adequate in relation to the workload in their respective departments					
3	The university employees are well experienced in the field of practice					
4	The university employees are always committed to work and committed to attaining the vision and mission					
5	There is adequate staff learning capacity due to availability of training opportunities					

PART III: Technological Resources

On a scale of 1-5 rank the following Technological Resources aspects where 5- strongly agree (**SA**), 4-agree (**A**), 3-fairly agree (**FA**), 2-disagree (**D**), 1-strongly disagree (**SD**)

S/ No.	**Statements on Technological Resources**	**5**	**4**	**3**	**2**	**1**
1	The university staff are ICT compliant					
2	There are technological innovations within the university					

3	There is availability of technological facilities in the university					
4	There is adequate ICT infrastructure in the university					
5	The available technology is effective					
6	The university encourages research and development programs					

PART IV: Intellectual Property

On a scale of 1-5 rank the following Intellectual Property aspects where 5- strongly agree (**SA**), 4-agree (**A**), 3-fairly agree (**FA**), 2-disagree (**D**), 1-strongly disagree (**SD**)

S/ No.	**Statements on Intellectual Property**	**5**	**4**	**3**	**2**	**1**
1	The university encourages innovativeness					
2	The university encourages new patents					
3	The university has introduced new processes and innovations					
4	The university encourages staff to publish in peer reviewed journals					

5	The number of publications in peer reviewed journals has increased in the past three years					

SECTION C: Organization Culture

On a scale of 1-5 rank the following Organization Culture aspects where 5- strongly agree (**SA**), 4-agree (**A**), 3-fairly agree (**FA**), 2-disagree (**D**), 1-strongly disagree (**SD**)

S/ No.	**Statements on Organization Culture**	**5**	**4**	**3**	**2**	**1**
1	The university has a clear mission that gives meaning and direction to our work					
2	The university leadership has made clear objectives we are trying to meet					
3	The individual progress is continuously tracked against stated objectives					
4	The university continuously adopts new and improved ways to do work					
5	The university leadership encourages and rewards innovation and risk taking					
6.	This university is very responsive and changes easily					
7.	Most employees are highly involved in their work					
8.	Everyone in this university believes that he or she can have a positive impact					
9.	Most people in the university have input into the decisions that affect them					

10.	The university has a clear and consistent set of values that governs the way business is done					
11.	The university's approach to doing business is consistent and predictable					

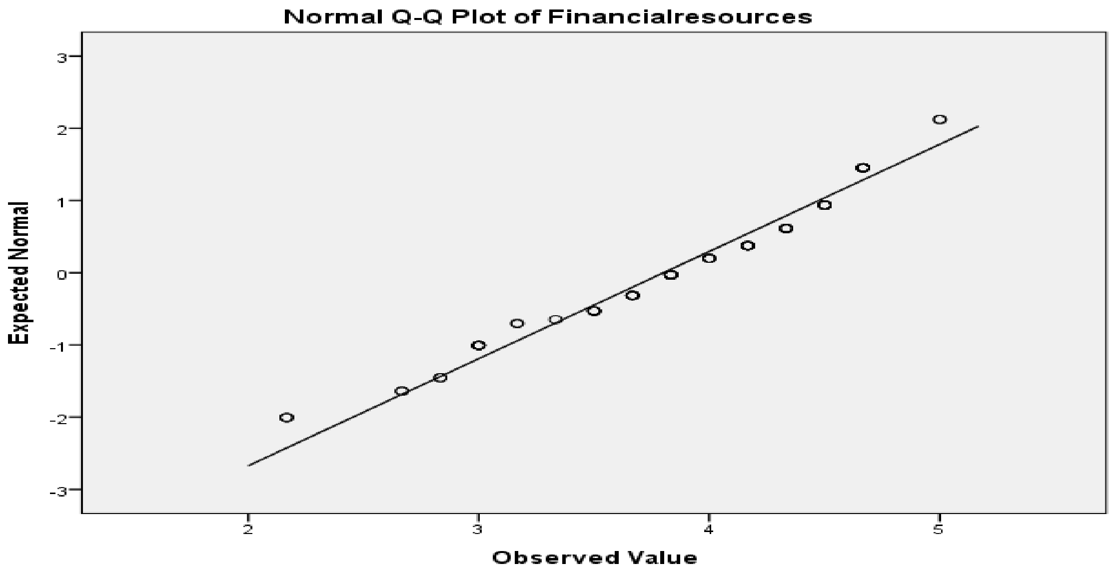
SECTION D: Performance

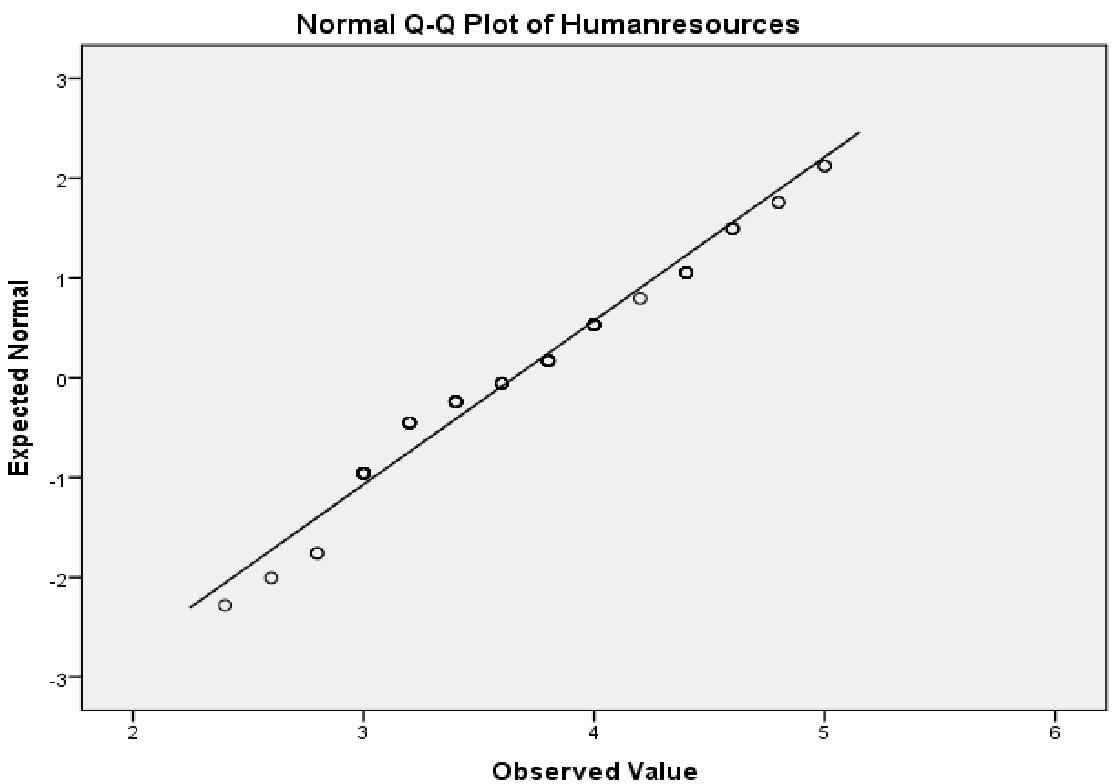
On a scale of 1-5 rank the following aspects of Performance of Public Universities in Western Kenya where 5- strongly agree (**SA**), 4-agree (**A**), 3-fairly agree (**FA**), 2-disagree (**D**), 1-strongly disagree (**SD**)

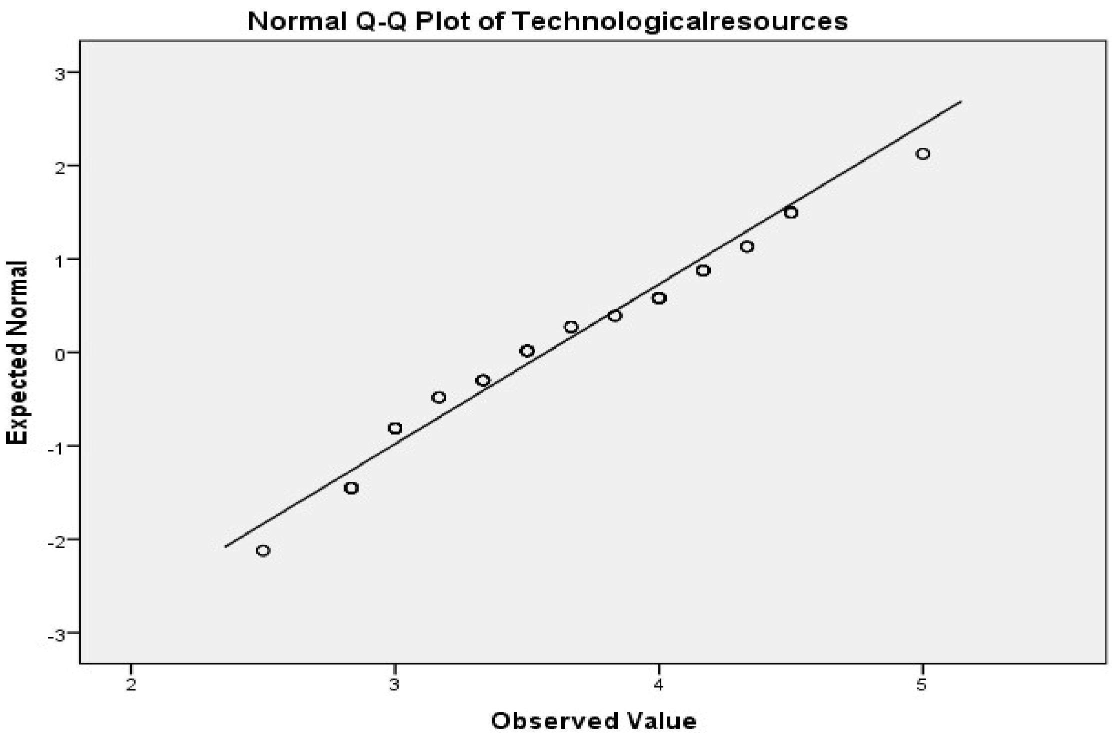
S/No.	**Statements on Performance**	**5**	**4**	**3**	**2**	**1**
1	The amount of revenue from grants generated by the university has increased in the past three years					
2	The number of students enrolled has increased in the past three years					
3	The university ranking has improved in the past three years					
4	The university employee satisfaction and morale has improved in the past three years					

Thank you for participating.

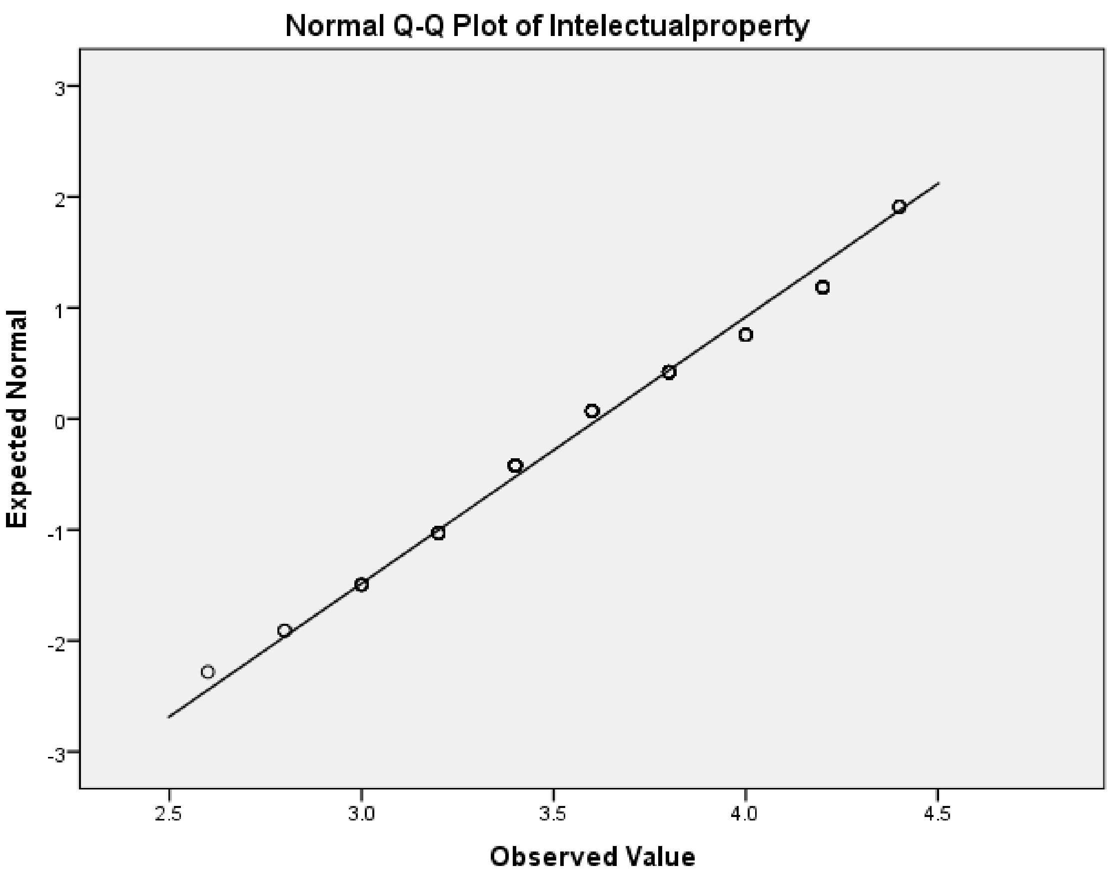
APPENDIX III: Q-Q Plots



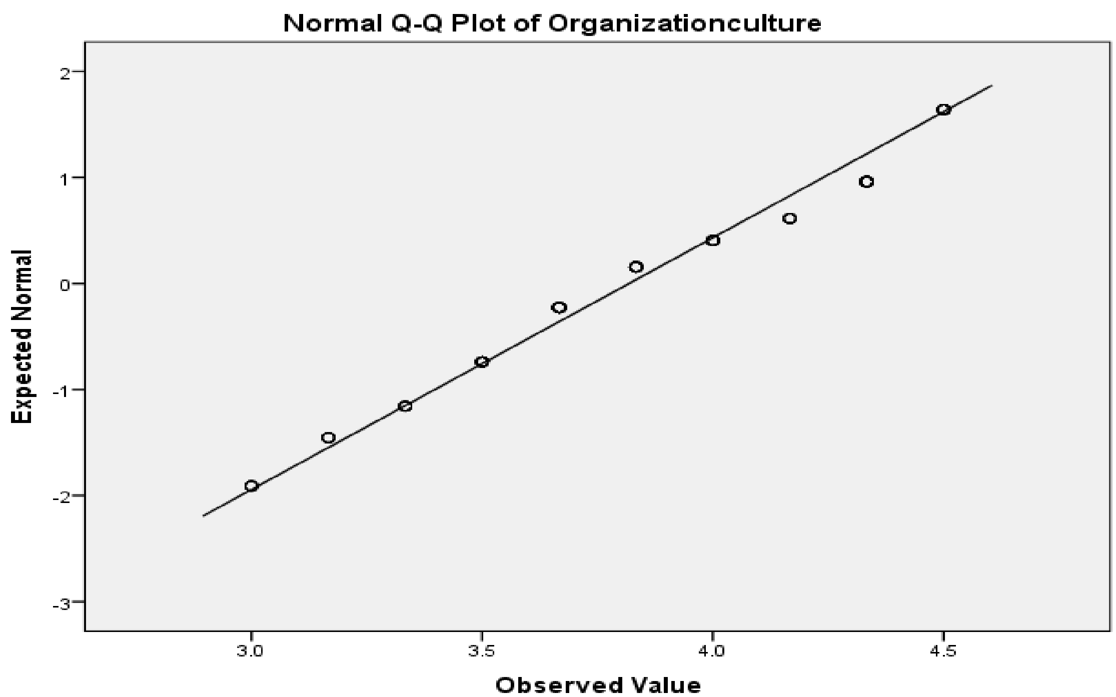


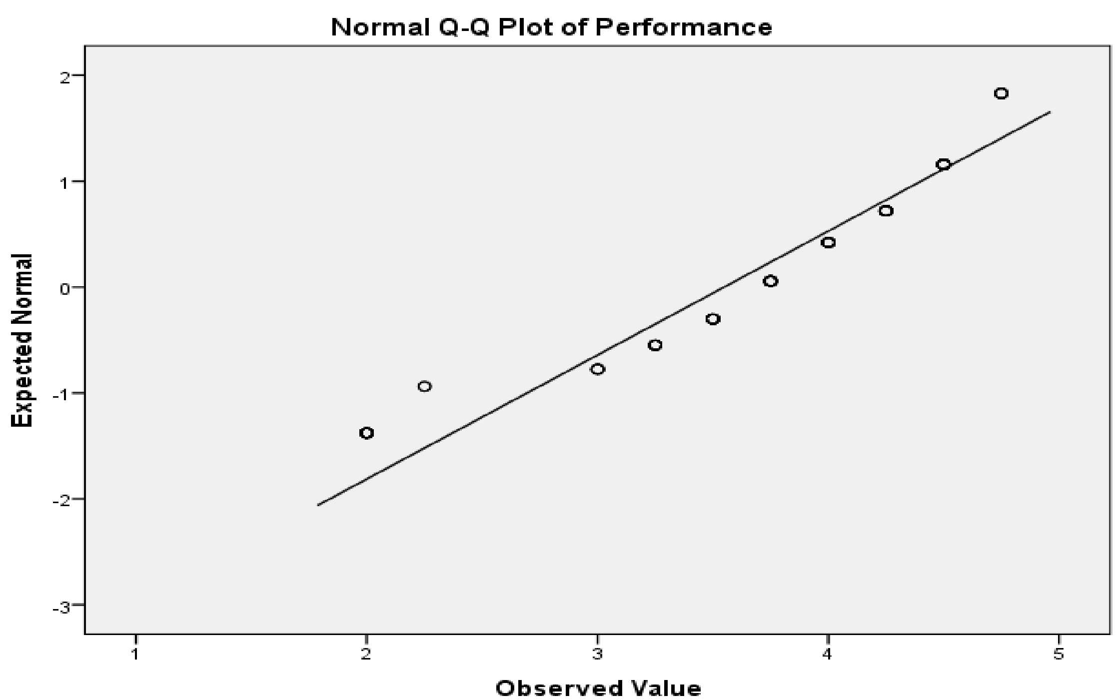


Normal Q-Q Plot of Technologicalresources
Expected Normal
Observed Value
3
2
1
0
-1
-2
-3
2
3
4
5



Normal Q-Q Plot of Intelectualproperty
Expected Normal
Observed Value
3
2
1
0
-1
-2
-3
2.5
3.0
3.5
4.0
4.5


Normal Q-Q Plot of Organizationculture
Expected Normal
Observed Value
2
1
0
-1
-2
-3
3.0
3.5
4.0
4.5


Normal Q-Q Plot of Performance
Expected Normal
Observed Value
2
1
0
-1
-2
-3
1
2
3
4
5

APPENDIX IV: NACOSTI Approval

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **150208**

Date of Issue: **02/August/2024**

RESEARCH LICENSE

This is to Certify that Mr.. Titus ingosi Mudi of Masinde Muliro University of Science and Technology, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Bungoma, Kakamega, Transnzoia, Vihiga on the topic: ORGANIZATIONAL RESOURCES AND PERFORMANCE OF PUBLIC UNIVERSITIES IN WESTERN REGION, KENYA. for the period ending : 02/August/2025.

License No: **NACOSTI/P/24/38541**

150208

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

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See overleaf for conditions

APPENDIX V: Proposal Approval

MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY (MMUST)

Tel: 056-30870
Fax: 056-30153
E-mail: directordps@mmust.ac.ke
Website: www.mmust.ac.ke

P.O Box 190
Kakamega – 50100
Kenya

Directorate of Postgraduate Studies

Ref: MMU/COR: 509099

25th July 2024

Mudi titus Ingosi
MBA/G/01-70370/2022,
P.O. Box 190-50100,
KAKAMEGA.

Dear, Mr. Ingosi

RE: APPROVAL OF PROPOSAL

I am pleased to inform you that the Directorate of Postgraduate Studies has considered and approved your Masters proposal entitled ‘***Organizational Resources and Performance of Public Universities in Western Region, Kenya***’ and appointed the following as supervisors:

1. Dr. Jackline Odero - SOBE, MMUST
2. Dr. Umulkher Ali - SOBE, MMUST

You are required to submit through your supervisor(s) progress reports every three months to the Director Postgraduate Studies. Such reports should be copied to the following: Chairman, School of Business and Economics Graduate Studies Committee and Chairman, Business Administration and Management Science Department. Kindly adhere to research ethics consideration in conducting research.

It is the policy and regulations of the University that you observe a deadline of two years from the date of registration to complete your Master's thesis. Do not hesitate to consult this office in case of any problem encountered in the course of your work.

We wish you the best in your research and hope the study will make original contribution to knowledge.

Yours Sincerely,

Prof. Stephen O. Odebero, PhD, FIEEP
DIRECTOR, DIRECTORATE OF POSTGRADUATE STUDIES

APPENDIX VI: List of Universities Targeted

University Name	Location (County)
MMUST	Kakamega
Kibabii	Bungoma
Maseno	Kisumu
JOOUST	Siaya

Source: Commission of University Education (2022)

Appendix VII: Map of Study Area