2024

Evaluation of how universities are seeking relevance through industry-led programmes in Nairobi, Kenya.

Kadima William Okello
Strathmore Business School
Strathmore University

EVALUATION OF HOW UNIVERSITIES ARE SEEKING RELEVANCE THROUGH INDUSTRY-LED PROGRAMMES IN NAIROBI, KENYA.

KADIMA OKELLO WILLIAM

77576

BUSINESS SCHOOL

STRATHMORE UNIVERSITY

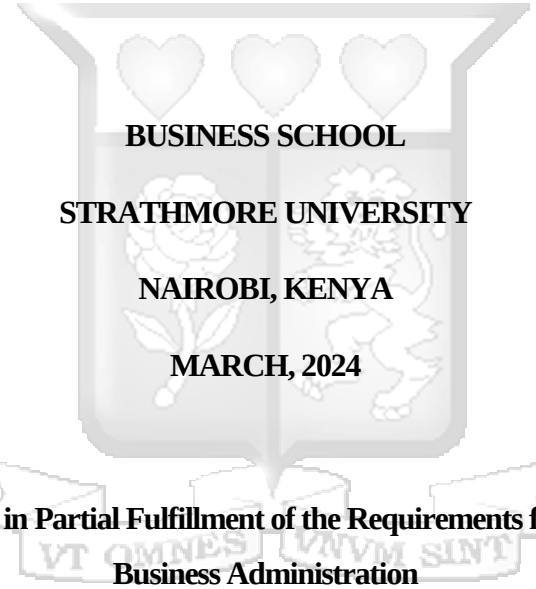
NAIROBI, KENYA

2023

EVALUATION OF HOW UNIVERSITIES ARE SEEKING RELEVANCE THROUGH INDUSTRY-LED PROGRAMMES IN NAIROBI, KENYA.

KADIMA OKELLO WILLIAM

77576



BUSINESS SCHOOL

STRATHMORE UNIVERSITY

NAIROBI, KENYA

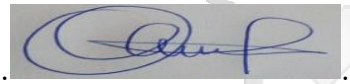
MARCH, 2024

Submitted for Examination in Partial Fulfillment of the Requirements for the Degree of Masters of Business Administration

DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

Name: Kadima William

Signature: ……  ……

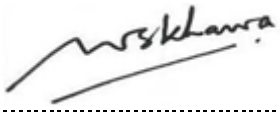
Student No: 77576

Date: 09th April, 2024

Approval

The thesis of Kadima William was reviewed and approved for examination by the following:

Dr. Wilson Wasike

Signature: … 

Strathmore Business School

Strathmore University

ABSTRACT

The overarching aim of this research was to evaluate how Universities are achieving relevance through industry-led programs (ILPs) in Nairobi, Kenya. The research was centered around Institutional Theory and The Resource-Based Theory (RBV), which underpin ideas on how organizations change and tend to become similar over time as well as the view on organizational resources and capabilities; with a key emphasis of this research being around structures, systems, industry linkages and the changing value propositions. In doing this, the research utilized a mixed-method approach to examine how universities achieve relevance through ILPs. A total of 198 respondents consisting of deans, academic directors, strategy officers, business development managers, and faculty were surveyed in the study, with both primary and secondary data collected. The data analysis comprised thematic analysis, descriptive statistics and inferential statistics. Reliability and validity were achieved through the evaluation of the plausibility of the variables in relation to the existing knowledge of their effect on performance within organizations. The novelty of the study can be viewed in the following ways; seeking to first enhance understanding of the changing value proposition of universities driven by industry programs and hence a framework upon which relevance can be built, and secondly to generate evidence on the variables relating to University-ILPs and their interplay to relevance within Universities. The research is also expected to contribute to the continuing discussion on curriculum development and the pre-existing government-research-teaching triple helix which seems to be broken. Findings suggest that, overall, ILPs contribute to university relevance. industry linkages, systems, structures, and value propositions all have a positive influence on university relevance. However, it is only industry linkages that have a significant impact. This research, therefore, proposes paying special focus on industry linkages for universities that wish to grow their relevance.

Keywords: Relevance, Industry-Led Programs, Universities, Higher Learning Institutions, Resource Based View.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

CBC	Competence Based Curriculum
CRM	Customer Relationship Management
CUE	Commission of University Education
DOPU	Drop-Off/Pick-Up
DVC	Deputy Vice Chancellor
ERP	Enterprise Resource Planning
HLI	Higher Learning Institution
ILP	Industry-Led Program
KU	Kenyatta University
LMS	Library Management System
MIS	Management Information System
MOU	Memorandum of Understanding
RBV	Resource Based View
SIS	Student Information System
TAT	Turnaround Time
UIL	University-Industry Linkage
UON	University of Nairobi
URC	University Research Center
USIU	United States International University

CHAPTER ONE
INTRODUCTION

1.1 Background

Universities sit at the core of creating a just, socially desirable, and economically empowered society. According to Barnett (2018), to do so, not only should the industry linkages be redefined, but the 'linguistic turn' to 'a practical turn' must be embraced. This idea that universities should embrace urgent societal problems rather than academics may be the orchestrator of the modern debate on higher education and whether it's well suited for its purpose. Globally, the transformation of the education system has been the core of the development of any country that has its economic fortunes and rising standard of living, as Smith (2017) explains.

According to Jarvis (2020), the effects of advanced capitalism have put pressure on education systems and, more so, universities to respond to immediate problems of socio-economic welfare. The rise of the division of labor has changed the workplace. The emergent of the knowledge worker now demands specialized attention, training, and programs as a way to empower him as well as enrich his fulfillment journey. Jarvis (2020) holds the disposition that this global trend has cascaded down to not-so-advanced capitalist regions because of the globalization of economies.

While the aspect of lifelong learning seems to be the theme underpinning the wave of changes seen in the universities' curriculums, Jowi (2018) holds that the African region education agenda needs to be inclusive of both future and immediate societal concerns, bringing together all the relevant stakeholders. The existing triple helix of government-industry-universities, which has been the framework for universities in Africa, is one that has been put in question in regards to its appropriateness, especially with the changing times (Meissner et al., 2018).

Lewin and Ergas (2018) use the allegory of the cave metaphor while discussing the African education systems. In their disposition and acknowledging the many steps ahead for African universities in their quest for relevance and solving societal problems, they opine that learning is contextual and African Universities need to embrace and incorporate the African geographical context, norms, and cultural differences while designing the suitability of programs.

Locally, the suitability of the whole Kenyan education system has been under scrutiny (Simiyu and Stephen, 2021). The sharp focus on the higher education sector, in particular, is due to its

positioning, which is closer to the industry where the knowledge is meant to be tested into practical solutions (Nasongo and Musungu, 2009).

Faced with diminishing funding and income from the government (Odhiambo, 2011), the need for universities and other higher leaning institutions to reinvent themselves through unique value propositions, positioning, and industry linkages has become key to their survival. Globally, a greater responsibility of igniting innovation, fueling entrepreneurship, and inspiring the next generation of leaders, scientists, as well as professionals has been placed on universities and other higher learning institutions (Talebzadehhosseini et al., 2019). This research, in examining the interplay of structures, systems, industry linkages, and value propositions, evaluated how universities and Higher Learning Institutions are achieving relevance through Industry-Led Programs.

1.1.1 Overview of the Higher Education Sector in Kenya

The higher education sector in Kenya is the last stage in the initial 8-4-4 curriculum that was adopted in 1985 (Milligan 2017). It represents the last four years in the systems where learners are expected to complete their education by going through universities and other higher learning institutions. While the system has served as a knowledge base for the country for all these years (Shikuku et al. 2021), it is not until the recent past that it has endured sharp criticism. Calvert and Muchira-Tirima (2020), in their critique of the system, hold that the 8-4-4 system is one that is overpassed by time, and it cannot be relied upon to produce learners who are ready to compete on the international scene. It is maybe based on such criticism of the system that efforts to revamp the system have been instituted through the new Competence Based Curriculum (CBC) (Wekesa & Olela, 2022). Whereas M'mboga (2021) holds that it might be premature to determine if the new CBC is the answer to the ailing Kenyan education system, these changes have shunned the higher education space, leaving it to operate as it was before.

The corporate industry, which absorbs learners from higher education institutions, is the one that has been at the forefront, feeling the inadequacy and the ill-preparedness of these learners for the job market (Ogot and Onyango, 2022). While initially, they had training centers, academy centers, and other training avenues to breach this gap Mutoka et al. (2022), competition has become so

fierce, demanding focus on core business and outsourcing non-core resources. Training and development fall within this scope.

The government's bid to reduce expenditure and promote self-reliance among parastatals and other government agencies, as held by Kimeo and Achuora (2020), has led to reduced budgetary allocation to universities. While Oketch (2022) criticizes this move by the government, calling it out for looking to stifle the sector's growth, this move by the government is supported by studies such as Babina et al. (2020) who hold that by reducing government funding, universities have been forced to engage in research and source for alternative means of funding. This view is supported by Pujotomo et al. (2023), who hold the disposition that industry collaboration, research, and innovation are emerging as a new dawn for university sources of revenue. Locally, these collaborations have become a mainstay feature within the higher learning product offering, with continuous improvement and iterations leading to executive education programs (Hakizimana and Muathe, 2023).

1.1.2 Relevance and Role of Universities to Society

Society, together with the business environment, has changed, and so it remains under constant change (Jarvis, 2021). The education system, which is meant to be the anchor of this change, has been playing catch up, limping in the rear (Barnett, 2016). Although Smolentseva (2022) articulates that society should pave the pathway for education and learning, Terziev (2022) holds a different view. He opines that society and education are interdependent where there must be continued and constant inter-play in learning and improvement for each to function optimally and reinforce each other. Society which is unit out of three pillars; economic, social and political has been left exposed by a fragile education system (Kimeo and Achuora 2020).

On the economic front upon which this research is anchored upon, the restructuring of the global economy, from a positional competitive strategy, where companies sat like ponds on a square board defending their territories, to a 'war of movement' – defined by how quickly companies move in and out of segments and markets altogether (Ma et al., 2020), demand that higher learning institution adopt the same strategy to remain relevant. The need for curated, innovative, and solution-oriented programs has become key in any higher learning institution worth its name. In a call for universities to reposition their value proposition, Jarvis (2021) calls out higher learning

institutions to the need to innovate and understand the changing educational needs and the emerging new customers on the scene.

The knowledge worker, defined by Drucker (2006) as the individual who combines his cognitive abilities, learnings as well as experience to produce goods and services efficiently and effectively, has become a key edge in competition. The embeddedness of organizational knowledge, the assimilation process, and its iterations have made organizations not only willing to invest heavily in the knowledge worker but also value him more (Braunerhjelm et al., 2020). Universities and other higher learning institutions are realizing that to remain relevant and competitive; they must innovate by not only offering the traditional academic value proposition but tailoring their programs to accommodate these knowledge workers (Rieckmann, 2022).

Zamora (2016), in a value chain analysis, breaks down the synthesis process of how value streams flow within an organization. In one of the most notable articulations, he puts structures and systems at the core of delivering value to the end customer. Universities, like any other business whose value proposition is due to a well-knitted value chain, are not only organizing themselves structurally for optimum resource utilization but are innovating on the system's front in order to be efficient and effective in turnaround time Hoeborn et al. (2022)

The comparative advantage viewpoint of competition among nations (Porter 1990) has morphed into resource and capability-based competition. In acknowledging the inadequate discussion of the role of higher education in a nation’s competitive advantage, Lane and Johnstone (2012) hold that a nation's ability to produce a highly trained human resource labor force puts it at the forefront in the global competition arena. But to do this, its education system and, more so, universities must keep at pace with the changing technological and economic issues (Paton et al., 2020). Universally, the relevance of education, and in this case, higher education, has been viewed within the continuum of positioning towards advocacy and the creation of a just, socially desirable, and economically empowered society (Barnett, 2018). However, this study, which takes on relevance through the industry frameworks, sought to evaluate the relevance of universities based on an industry operational lens, with a focus on how industries are driving relevance in these institutions through industry-led programs (ILPs)

1.2 Problem Statement

The future of higher education is a topic of contention (Schejbal, 2022). While others regard it as a snowball that keeps gathering pace and changing shape contingent on societal paradigms, Kromydas (2020) holds the view that the future of higher education firmly lies within the grip of higher learning institutions, contingent on the industry's ability to innovate, keep at pace with the changing economic times as well as their mandate to keep shaping society.

Whereas Shikuku et al. (2021) held the view that the Kenya education system has been limping in the rear on both social and economic fronts, Oketch (2022) offers a reprieve to the industry in his analysis by holding a disposition that industry-led programs are offering cutting edge solutions to societal and business problems. While studies have focused on the fit of the Kenyan education system, little has been done on the front of the future of higher education and its changing value proposition, especially considering the new triple helix of research-innovation-teaching as opposed to the preexisting helix of government-industry-education (Meissner et al., 2018).

Whereas there exists a gap between the industry and the education system Fomunyam (2020), higher education institutions have been on the fore front to try and fill this gap through Industry-Led Programmes. However, being a new wake in the industry, where programs are tailored to the immediate problem as opposed to the long-term curriculum, which undertakes the one-size-fits-all approach, little research information exists that informs and maps this quest for relevance. In acknowledging that the end to this pathway of seeking relevance offers innovation, growth, and funding opportunities, Ochwangi et al. (2022) do not offer a rubric for how this pathway is being realized and the specific aspects being instituted by these institutions to achieve the relevance.

The current research bodies seem to focus wholly on the higher education sector through conventional curriculums. Whereas the education landscape in Kenya has changed over the course of years due to industry pressure and demands, little research exists to evaluate the quest for relevance by universities within this space through Industry-Led Programmes. It is based on these assertions that this research sought to establish how universities and other higher learning institutions are achieving relevance by scrutinizing core aspects of their operations, such as structures, systems, value prepositions, and industry linkages.

1.3 Research Objectives

The overarching aim of this research was to establish the measures that universities have put in place to ensure that they remain and achieve relevance – both operational and strategic through the changing higher education landscape. The proposed research proposes to evaluate value propositions, structures, and systems, as well as, industry linkages that seem to sit at the core of their relevance quest.

1.3.1 General Objectives

This study aimed to evaluate how university-led programs effect university relevance in Nairobi, Kenya, and the moderating role of university reputation.

1.3.2 Specific Objectives

i. To evaluate how industry linkages are contributing to universities' strive for relevance.

ii. To establish how systems are contributing to universities' achievement of relevance.

iii. To establish how organizational structures are contributing to universities' quest for relevance.

iv. To evaluate how universities' changing value propositions contribute to the achievement of relevance.

1.4 Research Questions

i. How do industry linkages contribute to universities' strive for relevance?

ii. How do systems contribute to universities' achievement of relevance?

iii. How do organizational structures contribute to universities' quest for relevance?

iv. How do universities' changing value propositions contribute to the achievement of relevance?

1.5 Scope of the Study

This study is limited to the universities within the Nairobi metropolitan area and how they are seeking relevance through industry-led programs. While it is important to note that several higher learning institutions fall outside this geographical scope, this study sought to encompass all universities with campuses within the Nairobi Metropolitan area.

In noting the distinction between public and private universities in the higher education space, this study sought to overlook the distinct aspects of their operation frameworks and focus on industry-led programs as a driver for relevance within both private and public universities. This was key in providing a holistic view regarding this emerging trend within universities.

1.6 Justification of the Study

This study first sought to shape the public discourse regarding the well-being of university education. In doing this, the study aimed to provide a grounding framework upon which the policy makers can rely in coming up with policies and laws affecting universities.

Industry-led programs are a new dawn within the university space M'mboga (2021). This study sought to provide an overlay framework upon which institutions can benchmark while instituting measures and strategies to achieve relevance. While it is worth noting that measures and strategies are contingent on institutional culture and other mitigating factors, the study sought to appraise these aspects and offer a holistic view of the institution.

The significance of this research proposal can be seen from the standpoint of the knowledge worker. Faced with the weight of decision-making in a fast-paced global economy, the knowledge worker in need of institutions worthy of being training centers for tailor-made programs can rely on this study to appraise and evaluate which institutions are best suited to his immediate needs.

The Corporate world seeking to get into strategic and operation alliances and partnerships with institutions will be able to draw insights from this study framework when evaluating which institutions meet their interests and working paradigms. This will increase the chances of successful implementation of programs and ease of steering them with the possibility of joint investment opportunities.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter seeks to examine studies that have been conducted within this domain. The chapter also establishes concepts and approaches towards the changing higher education landscape and how institutions have moved to cope with the changes. This chapter further seeks to establish the theoretical grounding of this study, discussing the applicable theory and its relevance to this study.

2.2 Theoretical Framework

In addressing the topic "Evaluation of how universities are seeking relevance through industry-led program in Nairobi, Kenya," the theoretical framework serves as the conceptual foundation upon which this inquiry is founded. Grounded in the prevailing literature and conventional theories, the framework seeks to offer means through which to comprehend the interplay between universities and industry, enlightening the strategies and factors that contribute to the achievement of relevance through industry-led programs.

2.2.1 The Institutional Theory

Institutional theory is a concept in organizational studies whose origin traces back to the works of the institutionalists, Karl Polanyi, in the mid-20th century. "The theory focuses on the roles of social, political, and economic systems in which organizations operate and gain their legitimacy" (Hanna et al., 2023). It has, thus, has risen to become a powerful tool through which organizations and individuals' actions can be viewed. According to the Commission of University Education (2023), institutions change over time. The commission further holds the view that, while organizations serve to powerfully drive changes and shape the nature of change across levels and contexts, they themselves change in character and potency. Institutions are incentivized to change in order to gain legitimacy and reduce uncertainty in the environments in which they operate (Aksom & Tymchenko, 2020). They further hold the thought that, while organizations embrace change under institutional changes, they gain social acceptance, resource accessibility, and establish credibility.

In the application of this theory to this study, Universities have had to undergo institutional changes, specifically isomorphism. Defined by Buchanan (2020) as a perspective focused on how organizations tend to become more similar over time due to pressures to conform to prevailing institutional norms, isomorphism has seen the higher education space see an emergency of Industry-Led programs across major universities in Nairobi. This has been orchestrated by the need to meet market demand. Hwang and Choi (2017), while dissecting classical institutional theory, examined isomorphism through three lenses. They held that institutional logics, which they termed as a perspective on how different institutions are governed by distinct logics or governing principles that dictate the decision-making process, see organizations, although appearing to be similar, stand out distinctively in their internal process. In a market space of a willing buyer and willing seller Robert et al. (2017), the differentiation process by the different Universities in their product offering and positioning is a means to seeking relevance.

According to Buchanan (2020), although the Institutional Theory through institutional logic advances the idea of differentiation based on underlying principles and values, Gunther (2008) holds the view that the investment can only be relevant with a clear understanding of customers' perceived value of the differentiator, and to what extend it contributes to a favorable buying decision as well as the willingness to pay. Over time, institutional entrepreneurship, which is a lane of isomorphism, has seen Higher Learning Institutions and Universities innovate from MBA as the core product to come up with executive education (Schlegelmilch, 2020). Defined by Seyfried et al. (2019) as a focus on how individuals or organizations promote change by challenging existing institutional norms and practices, institutional entrepreneurship has redefined the higher education landscape. For the C-suite executives now faced with new challenges and rigors of their executive decision-making, executive education, and other Industry-Led programs have become handmaids in their business decision-making process (Pidgeon, 2017).

For a long time, the education sector and, by large, the higher education space have been known for their conservative nature and approach towards management, value proposition, and fundamental structure. However, according to Moid (2021), the events of Covid-19 saw a major shakeup within the industry. While the legitimacy of online education and degrees was viewed with skepticism in the Kenyan context, the events of post-COVID-19 changed this perception entirely. The institutional theory is underpinned by the thought that institutions change as a way

to conform to the disruptive environment, and the change is sometimes forced. For any university to maintain its legitimacy and continue being credible in its value proposition, it had to adopt online teaching. The interlay of systems and structures to come up with platforms such as e-learning platforms and web-enabled classes was a rush move to conform to the prevailing disruptive conditions within the industry.

The question of legitimacy has plagued the Kenyan Education system since the inception of the 8-4-4 curriculum in 1985 (Milligan, 2017). In the breadth of institutional theory, which advances the idea that organizations change as a way to gain legitimacy, universities and Higher Education Institutions, although gradual, have endured a change cycle, some orchestrated internally, others from the disruptive environment they operate in. The question of legitimacy has been raised by the industry, constantly expressing the lack of preparedness of fresh graduates for the job market (Mukhwana, 2017). To address this gap and inadequacy of the curriculum, the emergency of collaborations through industry linkages has seen universities develop industry-led programs.

To address the uncertainty embedded in the disruptive environment in which Universities operate today, many have now adopted an Innovation-Research-Teaching helix framework, which seeks to keep these institutions at pace with the changing business environment (Meissner et al.,2018). In a nutshell, Universities have changed. The changes they have undergone can be viewed through the lens of Institutional Theory, which appraises the different changes they have undergone and offers a theoretical framework upon which these changes can be discussed.

2.2.2 The Resource Based Theory

Kogut and Zander (2003) deposit that firms, through combinative capabilities, replication of technology, and knowledge, are able to either gain a competitive edge or deliver better services to consumers. Although the focus of Resource Based Theory (RBV) is not competition but rather the basis upon which a company's operations are founded, Kogut and Zander (2003) hold that these aspects of the firm ultimately determine its position in the industry. The Resource-Based View Theory bases its framework on a company's internal capabilities, competencies, and assets, which are classified as either threshold capabilities or strategic capabilities. Chuang (2004) defines threshold capabilities as the underlying resources any firm in any industry must have in order to deliver value to the customer. While noting the distinction with strategic capabilities, which

Chuang (2004) highlights as being at the core of a differentiated service offering, he holds that threshold hold capabilities are embedded in the organization's operation, sometimes in routine and repetitive work.

Kogut and Zander (2003) define a firm as a community that specializes in the creation and internal transfer of knowledge, which best captures universities and other higher learning institutions. Like any other firm operating within the bounds of economic realities, they invest in resources, some of which end up being at the threshold while others become or evolve to be strategic. Newbert (2008) classifies resources in the VRINEO Model as either Valuable, Rare, Imitable, Not-substitutable, Exploitable, or Organized, holds that a resource with the above aspects ultimately hands an organization a superior positioning in the industry with a long-term competitive advantage. Although Porter (1990), in demystifying the competitive edge built on natural resources endowment in his classical competition theory, holds that a nation, and to this extend a firm's competitive advantage, will not be inherited but created, The Resource Based View differs with this notion. In highlighting the importance of knowledge assimilation, which is based on Porter's view, certain strategic resources confer special advantages to organizations, such as strategic location.

Within the knowledge industry and the large higher education industry, value is more driven by capabilities and competencies rather than by the endowment of resources. Anowar et al. (2014), while evaluating the university ranking systems, contents that many of the available ranking systems are based on absolute number scale measures such as square kilometers of the university, population size, enrolment numbers, and completion numbers when in the true sense, the value proposition lies in the intrinsic capabilities beyond the figures. Hagoug and Abdalla (2020), in evaluating the strategic capabilities of universities towards delivering their value proposition, hold that a university's soul lies in its ability to assimilate knowledge. The library and the classrooms are the moving parts of the university body that facilitate the higher purpose of knowledge transferability. In his breathe, these are threshold capabilities.

The changing value proposition within universities has been a tale of two fortunes. Heidi I.L. Jacobs (2020) believes that universities have had to change. Their basic structures to their threshold capabilities have changed. What could sustain them to effectively deliver the value proposition before has become lacking, and the need for new capabilities has been spelled by the disruptive

and dynamic operational framework. For instance, the novel COVID-19 meant that while technology was not a threshold capability in knowledge delivery, the education landscape massively changed, with distance learning being the norm of operations. Hakizimana and Muathe (2023) view that while these changes have called for increased investment, they have also opened an avenue for the changing value proposition and an intricate overlay of structures that have attracted the private sector through executive education.

Le Minh Thanh (2019), in his view regarding systems and structures, holds that while systems form a major component of the threshold capabilities, structures, on the other hand, could be a strategic capability depending on how organized they are. Newbert (2008), in his VRNEO Model, evaluates how well organized the resources under the helm of the organization, and in his view, this aspect is a major determinant if the organization realizes the long competitive advantage that comes with such a resource. Organization as a function is one inherent within the structure of the company. According to Guillemette and Paré (2012), the combinative nature of organizations' useful resources lies in the ability of their structures. Most importantly, its leadership. Universities are bodies that derive their lifeline from their management. According to Murugi and Ongoto (2018), the strategic vision of Kenyan universities, both private and public, is dependent on the vice-chancellor. They hold the disposition that, the position not only serves as a reference point for strategic direction but serves as a focal point for power and reputation.

In summarizing the application of this theory to this study, The RBV theory lays a foundation upon which the antecedents that underpin this study interlay towards delivering value propositions within universities.

2.3 Empirical Review

The empirical review section of this study appraises the strategies put in place by universities in Nairobi, Kenya, to attain relevance through the enactment of Industry-Led Programs. Based on the theoretical foundations established in the preceding chapters of this research proposal, this empirical review deep-dives into the real-world practices and the aftermaths of such enterprises. The appraisal focuses on uncovering the range upon which universities effectively aligned their academic offering with the disruptive and dynamic needs of the industry. This empirical review strives to create a linkage between theory and practice by unveiling the tangible outcomes of

universities' quest to remain operationally and strategically relevant in the swiftly changing socio-economic landscape they operate in through industry-led programs.

2.3.1 Industry Linkages and University Relevance

The era of partnerships and collaboration is upon us (Kumaraswamy et al., 2021). Businesses are realizing that they cannot do it alone or build it alone. The problems they face extend their tentacles beyond their resources and human capacity, and they are now seeking collaboration and partnerships (Doina et al., 2021). Universities have embraced an industry linkage approach within their operations, offering knowledge expertise and acting as training centers to position themselves strategically (Calvert & Muchira-Tirima, 2020). While the quest for relevance among universities and other higher learning institutions is a snow ball topic that keeps gathering pace with the changing demands on higher education, the sure way for universities to keep at pace and not be left playing catch up is to keep an open channel with the industry (Hensley et al., 2020).

Empirical studies offer varying perspectives on the relationship between industry-university collaboration and the relevance of higher learning institutions. For instance, from Africa's point of view, Sá (2015) sought to examine the relationship between industry and universities. This study offers insightful views into the strategic industry-university partnerships, including factors facilitating the relationships, those inhibiting them, and potential opportunities. The researcher interviewed 32 informants from 13 African countries and employed standard qualitative data analysis techniques to analyze data. The general sentiment among the interviewees was low expectations for university-industry partnerships. They also cited the cultural divide between the sectors and past economic upheavals as hindrances to the success of the partnerships. While this study offers insightful views into the topic, it is not without gaps, which include conceptual and methodological limitations. For instance, the effect of industry linkage on university relevance is not quantified or demonstrated well.

In a similar investigation based in Tanzania, Bangi (2020) sought to determine the existing linkage between higher learning institutions (HLIs) and industry. The study was based on five local industries, two universities, and three non-universities from whom a sample of 20 industry officials, faulty deans, and research directors was purposively selected for interviews. The

researcher employed thematic analysis to analyze data. It was observed that linkage in terms of training out was moderate, research and consultancy services were low, and knowledge transferred from HLIs to industries was mainly through employment opportunities and field placement. In addition, low motivation among academicians, mistrust among industry owners, and meager budgets were pointed out as issues for the linkages. Therefore, Bangi (2020) concluded that there is a weak link between HLIs and industry in Tanzania. Notwithstanding the findings, this study was based in Tanzania and failed to conceptualize university relevance as an outcome variable, a gap that the present study sought to address.

Adopting a systematic review of literature, an approach that differs from Sá (2015) and Bangi's (2020) studies, Teressa's (2022) research focused on the function of industry linkages (UIL) in the adoption of undergraduate field-based learning (FBL) in Ethiopia's HLIs. Findings indicated that UIL was not properly practiced during the adoption. In other words, as Bangi (2020) found in Tanzania, a similar observation of the low rate of UIL in Ethiopia is made. Despite the existence of conditions supporting the linkage, HLIs did not play a leading role in facilitating the adoption of FBL. The researcher attributed this to a variety of issues, including the inability to translate MoU into practice and the shortage of industries. This research is a valuable contribution to the UIL discussions. However, it failed to conceptualize university relevance, used a qualitative method, and was based in Ethiopia. The present study sought to address these limitations.

A study that offers valuable insights into the relationship between university-industry collaboration (UIC) and its relevance to higher education institutions (HEIs) was conducted by Al Weshahi (2022) in Oman. This study makes three key observations based on the systematic review of literature – the impact of UIC on higher education, its impact on the labor market, and the imperatives of promoting sustainable UIC. On UIC's impact on Oman's higher education, Al Weshahi (2022) noted that the linkages were "associated with students' learning improvement albeit indirect, and other significant gains for HEIs are meeting local government vision and finding a partner to fund their research." In other words, it can be deduced from Al Weshahi's (2022) perspective that UIL enhances university relevance. However, it is worth noting that the geographical scope of the study was limited to Oman and that it was based on secondary data.

2.3.2 Systems and University Relevance

Viewed wholly by Zhang et al. (2021) as a complex, non-linear system, higher education in terms of value delivery is a chain of connected processes that can be summed up as a value chain. The disintegration of operating as independent units while uniting towards a common purpose is what Porter (1990), in his value chain analysis, referred to as unity in mission. In the modern business world, where success is contingent on the pace of execution, business investment in operation systems has become a standard industry practice (Gumba et al., 2021). Whether investment in reliable technological infrastructure upon which operations and value chain activities are embedded offers a sustainable industry advantage is a question Gumba et al. (2021) pose. However, with new cutting-edge technologies and reduced cost of investment, technology has become more of an enabling factor rather than a differencing factor in modern-day business operations (Danko, 2022). Different organizations tend to deploy different systems depending on the industry and value proposition (Ali et al., 2022). It is now the norm for educational institutions and, more so, higher learning institutions to deploy the use of E-learning services.

The growing demand for information systems in higher learning institutions has drawn the attention of many researchers. There has been particular interest in the impact of these systems on universities. For instance, Hayati et al. (2021) examined how the implementation of information systems impacted the performance of universities in West Java. The researchers used a quantitative analytic method to fulfill the objective of the study, where a sample of 163 respondents from universities were surveyed using questionnaires. The study used structural equation modeling (SEM) to analyze data. Hayati et al. (2021) found that "he success of information systems' implementation has a positive effect on the quality of governance and a positive impact on the performance of the university." However, since the study was based in West Java, its findings cannot be inferred to the Kenya's higher education sector.

A similar survey based on Jordan's universities was conducted by Al-Ahmad and Alnajjar in 2009. In particular, the study looked into how management information systems (MIS) impacted the performance of universities that had business colleges. Questionnaires were distributed to a sample of 120 respondents from 15 selected universities. Spearman correlation and simple regression were adopted for data analysis. Results showed that MIS had a positive and significant impact on the performance of universities. Despite Al-Ahmad and Alnajjar's (2009) contribution to the topic, it

is worth noting that this study was not without limitations. It is more than a decade, denoting a time scope, and was based in Jordan. Therefore, the findings accompanied by a conclusion cannot be generalized to the phenomenon in Kenya, hence the need for the current study.

Bright and Asare's (2019) empirical research is proof that not every study subscribes to the conventional wisdom that information systems translate positively to a university's ability to attain and sustain relevance. In this study, the researchers sought to examine how MIS impacts the University of Education Winneba in Ghana. One hundred respondents were recruited and surveyed using questionnaires and observations. Bright and Asare (2019) observed that the impact of MIS was not adequate and attributed this to the insufficiency of technological resources. The study does not necessarily dispute the claim that information systems enhance universities but produces evidence to suggest that the impact is underwhelming. However, since the study was based in Ghana, its findings may not be relevant to the dynamics of information systems in Kenya's universities. Therefore, the present study sought to address this gap.

The accelerating pace of technological innovation motivated Madonsela (2020) to examine the effect of MIS in attaining a competitive position by focusing on manufacturing firms in Sub-Saharan Africa. A qualitative research methodology was adopted, and a sample of 15 respondents was invited for an interview. The study found that MIS, through IT-enabling business processes, helped manufacturing companies to strengthen their competitive advantage. Madonsela's (2020) research and its findings are relevant to this topic in that competitive edge is crucial to an organization's ability to stay relevant, which is the focus of this study. Its shortcoming, however, is that it was based on the manufacturing sector across multiple countries, denoting a scope limitation. The present study was contextualized to Kenya's higher education sector.

2.3.3 Organizational Structures and University Relevance

Defined by S et al. (2022) as the extent to which an organization embeds itself around aspects of operationalization, centralization, standardization, formalization, and configuration, structures form a core part of any successful organization. Whereas S et al. (2022) establish that it is notable to note that organizational structures are contingent on operational context, much of the differences can be explained through contextual factors such as the size of the organization, technology, organizational charter, and social function. Cho and Lee (2020) hold that systems and structures

are the blueprints for efficient and effective service delivery. While Cho and Lee (2020) are keen to draw a distinction between the two, holding that systems are an overlay of technology, they advance the thought that structures are a subset of leadership. In a cutting-edge thought on systems, Vargo et al. (2008) hold that systems that deliver real value to the end user are a configuration of people, resources, and technology.

The correlation between organizational structure and performance of higher learning institutions has variedly been explored. A classic example is Cyiza et al. (2022), whose study focused on organizational structure in the performance of teacher training projects in Good Neighbors International in Rwanda. A sample size of 129 training participants and 30 project managers were recruited and surveyed using questionnaires. Descriptive and inferential analyses were adopted for data analysis. Three observations were made: job design did not have a statistically significant impact on project performance. However, departmental design and organizational hierarchy were both significant predictors of project performance. However, the impact of organizational hierarchy was more profound than the other variables. Nevertheless, the study is limited in that it was conducted in Rwanda and was not contextualized to the relevance of universities but rather focused on the performance of projects in higher institutions.

Still, in the higher education sector, Zapata (2019) sought to examine the relationship between organizational structure and performance of University Research Centers (URCs) in Aragon, Spain. The researcher adopted a systematic review of literature whereby data on science, technology, and innovation (STI) indicators between 2000 and 2016 was extracted. A mixed-method approach (data panel analysis and case studies) was used for data analysis. It was observed that URC institutions with complex structures were associated with better performance. According to Zapata (2019), an organizational structure that mimics corporate governance at URCs promotes better research performance. This is, however, a quantitative study that looks into the impact of structures on the relevance of universities in Kenya since Torres Zapata's (2019) study is limited in terms of methodology and geographical scope.

Elsewhere in India's hospitality sector, Mathur and Nair (2016) analyzed organizational structure in five-star hotels of the National Capital Region (NCR) as a driver of competitive advantage. A sample of 500 employees was targeted using convenience sampling and surveyed using interviews and questionnaires. The study revealed that a poor organizational structure leads to poor employee

performance. On the other hand, in a well-organized structure where role clarity, goals, and objectives are defined, employees are motivated to perform better. In other words, organizational structure is a driver of competitive advantage among five-star hotels in India. However, since this study was based in India's hospitality industry, its findings may not be inferred to Kenya's higher education sector, hence the need for the present study.

The notion that organizational structure has a direct and positive effect on performance was confirmed by Fitria et al. (2017), whose study was based in Indonesia. The researchers examined the effect of structure and leadership style on teacher performance in private schools. A quantitative method with a path analysis technique was adopted, and a sample of 326 teachers was surveyed. Findings showed that both organizational structure and leadership style were positive and significant determinants of teacher performance. However, since the dynamics of organizational structure at the school level differ from those of the higher education level, these findings may not be generalizable to the phenomenon. Therefore, new research from the perspective of Kenya's higher education was warranted.

2.3.4 Value Proposition and University Relevance

Until the recent past, government funding, especially for public universities, has been a major source of capital for Kenyan Universities, Muriithi et al. (2018). However, the budgetary allocation has seen only 97B allocated to higher education as per The Kenya Treasury 2023 report. This trend has continued to plunge higher learning institutions and universities into strife for resources and capital. The response from these institutions has been a re-evaluation of their key value propositions in order to expand their customer base, as the tradition undergraduate students' segment does not sustain their operation and justify their benefit to the corporate world (Wangenge-Ouma, 2020).

Private universities, for a long time, have been the go-to place for quality programs, and the majority of the students who missed university entry, Kenya University and Colleges Central Placement (2023). Coupled with the outrageous costs of studying abroad, online education has had a low perception among Kenyans (Wangenge-Ouma 2020), giving a free ride to private universities to students who seek higher education outside conventional public universities. The occurrences of Covid-19 altered the education landscape in the country as well as globally (Paudel

2021). Education, like many other services, has become virtual, necessitating the entrant of giant global players. The move not only diminished private universities' dominance of the region but demanded a reevaluation of their value proposition, target audience, positioning, and service delivery structures, Shikuku et al. (2021).

Lewin and Ergas (2018), in the evaluation of knowledge and the merits it must hold for society to pass it as impactful, state that solutions sit at the core. The solution's impact could be on the social, economic, or political front. According to Andafu and Simatwa (2019), one of the major undoing of the entire Kenyan education system has been to do with this measure. They critique the system for its heavy leaning towards a theoretical approach, which ends up as a gamble in the corporate world where solutions drive business built around customer value.

The impact of value proposition has been demonstrated to have a positive impact on performance by Ilyas and Osiyevskyy (2022). Their focus was on the effect sustainable value proposition has on firm performance, which was measured using Tobin's Q. Data was drawn from secondary scholarly materials sourced from the KLD database. Ilyas and Osiyevskyy (2022) found that "a firm's R&D capabilities improve the positive effect of a sustainable value proposition on a firm's financial performance." However, "the marketing communication capabilities and sustainable practices regarding employee relations reduce the sustainable value proposition's financial performance effect" (Ilyas & Osiyevskyy, 2022). Therefore, the impact of value-proposition may vary. This research has methodological, conceptual, and contextual limitations, which the present study sought to address.

Offering a contrary view to conventional wisdom, Doligalski et al. (2015) produced evidence suggesting that "despite different characteristics, identified segments do not show statistically significant differences" in firm performance. The researchers arrived at this conclusion by surveying 150 online firms in Poland. The value proposition was measured using customer efficiency, value co-creation, complete customer solutions, uniqueness, and free benefits as indicators. However, while this study offers valuable insights into the ongoing discussions around the impact of value proposition on organizational relevance, it is not without gaps. For instance, it was based in Poland and focused on online firms. The present study focused on universities in Nairobi, Kenya.

2.4 Summary of the Research Gap

The current research bodies seem to focus wholly on the higher education sector through conventional curriculums. Whereas the education landscape in Kenya has changed over the course of years due to industry pressure and demands, little research exists to evaluate the quest for operational and strategic relevance by universities within this space through Industry-Led Programs. The interplay of factors such as systems, structures, industry linkages, and value propositions hasn't been conceptualized to achieve relevance within the higher education space. The focus has been on conventional metrics such as admission numbers, completion rates, and government funding, which modern universities have surpassed through the new research-innovation-teaching helix. It is based on these assertions that this research sought to establish how universities and other higher learning institutions are achieving relevance by scrutinizing core aspects of their operations, such as structures, systems, value prepositions, and industry linkages.

2.5 Conceptual Framework

The Conceptual Framework, as drawn below, is a visual representation of how the different factors within this study relate to each other. The relationship consists of independent, dependent, and moderating variables. As illustrated in figure 2.1 below, a number of factors play a role in the delivery of higher education value proposition. The dispositions of Zhang et al. (2021), which view the higher education space as a complex non-linear system, correctly summarize the below frameworks in which different antecedents interplay. Whereas the industry linkages, systems, and structures have a direct impact on the relevance of universities and other Higher Learning Institutions, other aspects such as reputation play a key role in an environment controlled by legal imperatives.

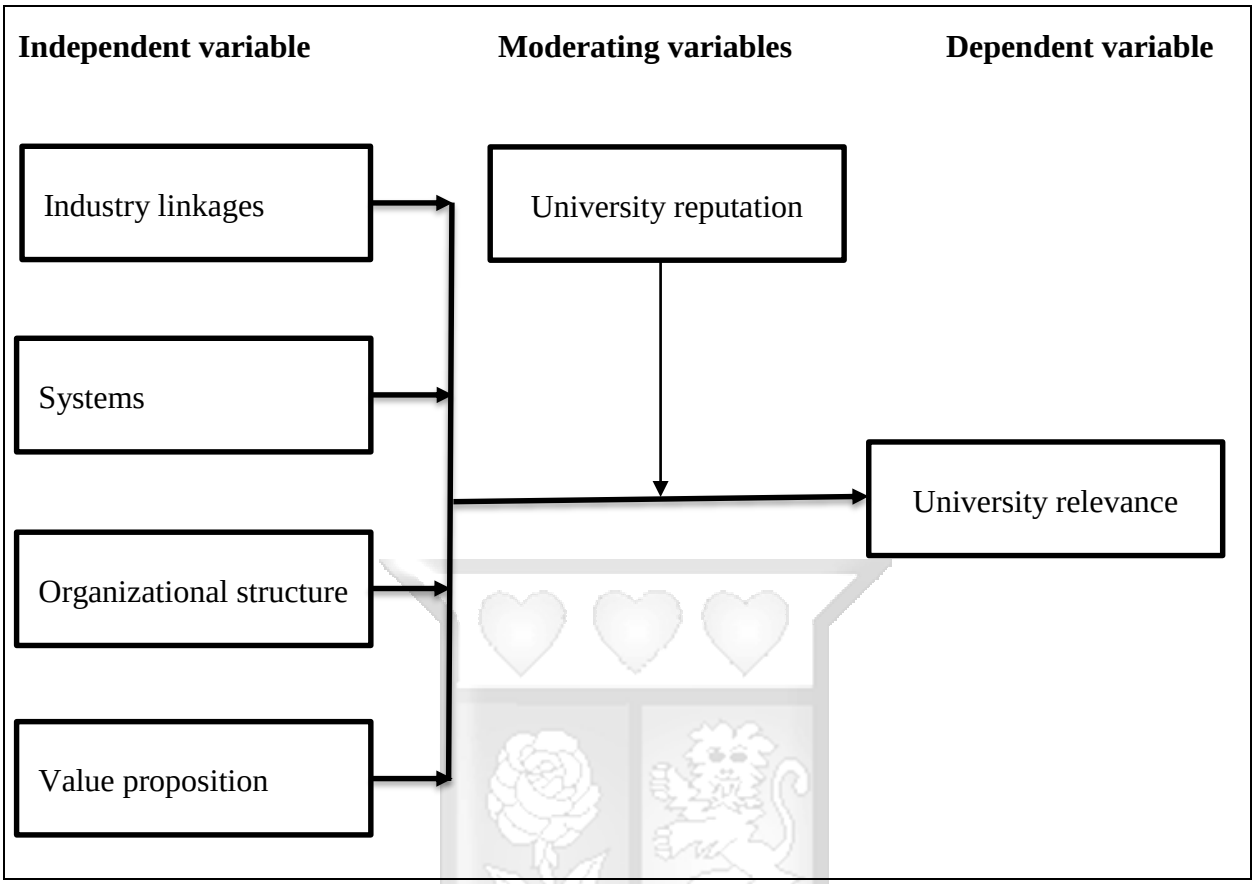


Figure 2. 1: Conceptual Framework

2.6 Operationalization of the Variables

This section brings the use of the key variables and terms to the context of the study. In doing so, the section defines and operationalizes the variables above, giving them contextual meaning. The specific aspects that were gathered as data in measuring and operationalizing the variables below are illustrated in Table 2.1 and the data checklist in Appendix 4.

Table 2. 1: Operationalization of Variables

Variable	Indicators	Scale (measurement)	Source
Dependent variable			
University relevance	• Demand for educational services. • Financial sustainability.	5-point Likert scale	(Dimitrova & Dimitrova, 2017; Kaur, 2022)

	• Familiarity and recognition. • Stakeholder satisfaction • Net promoter score		
Independent variables			
Industry linkages	• Meetings and networking • Personnel mobility • Training and development • Employment opportunities • Communication	5-point Likert scale	(Bangi, 2020; Teressa, 2022)
Systems	• Student information system • Learning management system • Customer relationship management (CRM) system • Enterprise resource planning (ERP) system	5-point Likert scale	(Demirkol et al., 2020; Abugabah & Sanzogni, 2010; Bradley, 2021, Badwan et al., 2017)
Organizational Structures	• A clear line of authority • Strong leadership • Proper delegation of authority • Adaptability • Shared values	5-point Likert scale	(Cyiza et al., 2022; Torres Zapata, 2019; Mathur & Nair, 2016)
Value proposition	• Relevancy • Benefits • Differentiation • Substantiation	5-point Likert scale	(Ilyas & Osiyevskyy, 2022)
Moderating variable			
Reputation	• Quality of educational services • External prestige • Affective image • Personality of the university	5-point Likert scale	(Gutiérrez-Villar et al., 2021)

Source: Author 2023

2.7 Chapter Summary

This chapter sought to discuss the conceptual framework that was applied in this study. The variables that feed into the proposed conceptual framework are discussed in this part of the study, with an emphasis on their application to the relevance of universities and other Higher Learning Institutions. This section of the study also sought to create a linkage between the theoretical foundation of the research and the practical application of the study. In the next chapter, the focus is on the methods applied in the study to collect and analyze data.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter of the research document endeavors to discuss the research approaches that were employed in the identification, collection, and analysis process of the data to make inferences about the study. This chapter seeks to appraise the methods chosen in detail and link them to the theory. In addition, this chapter qualifies why certain processes have been chosen in this study. It seeks to answer the question of "how" the data was collected and analyzed.

3.2 Research Philosophical

Ontology is sub-dived into two categories, Objectivism and Subjectivism (Basias and Pollalis 2018). Within the confines of objectivism which anchors itself in the interpretivism research philosophy, ontological dispositions perceive reality through the lens of what Creswell et al. (2006) call "social actors". Holding to the thought, ontological dispositions in research hold that reality can only be conceived outside social actors, and what exists can be observed through social reality. This is a contrast to subjectivism. The subjective with its roots in the positivist research philosophy, holds that various phenomena emerge due to contextual differences such as social, cultural, demographic, and professional background.

This research was rooted in both subjective and objective ontology as it sought to understand organizational performances based on operational and contextual differences, as well as observable social phenomena (Cook and Cook, 2016). The subjective ontological disposition helped develop further depth on Universities and Institutions of Higher learning within the Nairobi Kenya context by seeking experiences and perceptions of various population samples. The objective ontological disposition of this study was achieved through observable quantitative data. The foundational basis of quantitative study is that it embraces the use of statistical analysis to reach conclusions. What can be inferred herein is that "reality" and objectivism emerge in the sense that deduced knowledge is entirely regarded objectively. No opinions and perceptions are required in objectivist ontology. The study similarly espouses a positivist philosophy, which lays importance on measurement as a way through which factual knowledge can be proven (Rahman, 2017).

Particularly, positivism is founded on the belief that the researcher is only limited to the collection of relevant data, which is then used to conduct appropriate statistical analysis to produce knowledge. The quintessence of positivism is to "expound" and "forecast", meaning that a sample is studied, and the trend of the outcome is extrapolated to the broad population (Basias & Pollalis, 2018). It is equally noteworthy that the study adopted the interpretivist research philosophy, which holds that human interests are the drivers of knowledge which is grounded on the opinions and feelings of the participants in the research study. The adoption of the qualitative design in this study asserts that the interpretivism research philosophy was adopted in the study. Tables 3.1 and 3.2 below show the various strengths and weaknesses associated with the two research philosophies to be adopted Research Approach.

The advancement of any research study counts on a framework of arguments that underpins the whole study concept (Rahman, 2017). Rahman (2017) furthers this thought by noting that before the conceptualization of any study, the researcher has to fully be cognizant of the approach or argument that is intended to direct the study. Is it a completely new theory being developed or is it based on prevailing knowledge? The entire research approach is premised on the dimension of argument in the research. Is its context general or specific or otherwise? Kumar (2019) highlights three research approaches – deductive, inductive, and adductive. In this research, the deductive approach was applied.

3.3 Research Design

Saunders (2007) highlights the descriptive research design as one of the two research designs in his research methodology model. The descriptive research design through the deductive approach, builds a hypothesis from an already prevailing hypothesis. The deductive research approach pivots on the notion that knowledge can be transformed from a very general perspective into a specific perspective. Rahman (2017) holds that a general theory of knowledge is first of all built within the deductive model, and then the specific aspect of knowledge that is derived from the research is tested against it. Within the context of this research, the deductive approach is geared towards illustrating that certain operation frameworks such as Systems and structures, changing value prepositions as well as industry linkages are vital to their relevance. It is already known that universities and other Higher Learning Institutions are established with a mandate to offer knowledge through educational programs. But over time, as it is evidenced through institutional

theory, this mandate has been threatened with too many disruptions mainly those in the industry. Building on the frameworks established within the institutional theory, this study sought to establish how Universities in Kenya are achieving relevancy and legitimacy.

3.4 Target Population

The population of the study comprised management-level employees of universities with campuses in Nairobi Kenya, as of December 2023. According to Suri (2011), the choice of a population of study is grounded on the significance of the population in answering the research objectives that the study seeks to achieve. The importance of the research participants in a study must be appraised in relation to the degree to which they are experienced around the interest that the study sought to focus on, as well as their availability. These two aspects have been taken into account when coming up with the list of universities from which the participants to be interviewed were drawn. Table 3.1 shows the list of universities that were the focus of this study.

Table 3. 1: Classification of the target population

Public Universities	Private Universities	Faith-Based Private
University of Nairobi (UoN)	USIU	Strathmore University
Kenyatta University (KU)	Riara University	Daystar University

Source: Author 2024

3.5 Sampling

Sample design defines the appropriate method that can be used in choosing the units to be included in the inquiry (Sekaran and Bougie, 2016). It is through the sampling design that a researcher can determine the most relevant sample as there are clear means of categorizing the elements in a population. Sampling techniques comprise identifying methods that are crucial in choosing representative items from the population (Sekaran and Bougie, 2016). Sampling is a process of narrowing down the larger targeted population into smaller units that can easily be applied to derive sought information (Pattern 2017).

3.5.1 Sampling Frame

A sampling frame is the source material specifying the population of interest for a research study (Asiamah et al., 2017). It is a subset of the target population from which a sample is drawn. In this case, the precise group constituted deans, academic directors, faculty, strategic officers, and business development managers of the six selected universities. These are the representatives who are expected to be the keepers of the sought-after information. They were carefully selected based on their suitability for the study. The consideration for selection was based on the following: access to strategic information, active involvement in program formulation, direct contact with industry, active marketing and admission, and content delivery of the programs.

3.5.2 Sampling Method

A stratified sampling technique was used to identify the sample size. According to Parsons (2017), stratified sampling refers to a sampling technique where population representatives are divided into distinct groups with homogenous traits. According to Parsons (2017) dispositions, stratification is used to increase the efficiency of the sample design with respect to costs as well as estimate precision. In this study, each stratum in the selected institution contained individual representatives who were expected to be the keepers of the sought-after information.

3.5.3 Sample Size

The sample size was made up of one hundred and ninety-eight (198) respondents drawn from a pool of university employees. The focus of the study was only on the universities with campuses within Nairobi County. The study used the following method in calculating the sample size;

$$n_h = \left(\frac{N_h}{N}\right) \times n$$

Where;

n_h = Sample size in stratum *h*

N_h = Population size in stratum *h*

N = Population size

n = Desired sample size

Based on the stratified sampling technique, these considerations were applied to come up with a sample representation to be used in the study. The sample estimate was applied at a 95% confidence level and a 5% confidence interval (margin of error). The study used categorical and continuous data, Brauer and Curtin (2018). The appropriate sample size was chosen taking into account time constraints, cost implications, and the acceptable amount of sampling error.

Table 3. 2: Target Population Strata

	Deans	**Academic Directors**	**Strategy Officers**	**Business Development Managers**	**Faculty**	**Total**
UoN	3	5	7	10	8	33
KU	3	5	7	10	8	33
Strathmore University	3	5	7	10	8	33
Daystar University	3	5	7	10	8	33
USIU	3	5	7	10	8	33
Riara University	3	5	7	10	8	33
Sample size						**198**

Source: Author 2024

3.6 Data Collection

The study was based on both secondary and primary data. The study collected secondary data on the variables of university relevance (student admission rate, university ranking, and graduate employability), industry linkages (number of MOUs), systems (turnaround times), organizational structures (organizational charts and leadership), and value propositions (vision/mission statements and number of courses). This data was obtained from official websites and publications using Appendix 4 as the checklist.

Primary data was collected from research participants using semi-structured interviews and structured questionnaires. Meetings were scheduled with the deans, faculty, and academic directors in their respective offices for the interviews. A list of open-ended questions on the variables of interest as shown in Appendix 3 were used to guide the interview process which took

an average of 30 minutes. The views of the interviewees on the questions were noted and recorded for analysis.

Structured questionnaires were distributed to strategy officers and business development managers to collect primary data. These questionnaires consisted of close-ended questions on the variables. The research instrument was designed using the study's conceptual framework and operationalization of variables. As such, data was measured using a five-point Likert scale where 1=strongly disagree, 2=disagree, 3=neutral, 4=agree; and 5=strongly agree (Appendix 2). The questionnaires were distributed using the drop-off/pick-up (DOPU) method and online survey whereby links for the electronic version (Google Forms) of the questionnaires were shared with the selected respondents.

3.7 Data Analysis

Since the research study adopted a mixed-method (quantitative and qualitative) approach, the following data analysis methods were used.

3.7.1 Secondary Data Analysis

In the secondary data analysis technique, the relevance, authenticity, and quality of secondary data were evaluated using the following criteria: accuracy, period of collection, content of the data, and purpose for which it was collected. This was done to ensure secondary data use was of high-quality, relevant, and useful in answering research questions.

3.7.2 Thematic Analysis

Thematic analysis was used to analyze qualitative data from the interviews. The process involved reading through the opinions and views of the interviewees and identifying, analyzing, and interpreting patterns in the meaning of the data to find key themes.

3.7.3 Descriptive Statistics

Utilizing the SPSS software, descriptive statistics were also employed for data analysis. It was used to summarize the main qualities of the quantitative data. In particular, descriptive statistics, including measures of central tendency, measures of dispersion, and measures of distribution were

used to summarize and describe how research participants' responded to individual items on the questionnaires.

3.7.4 Inferential Statistics

The study also applied inferential statistics for the purpose of drawing conclusions, and making inferences or generalizations about the population based on the sample data. Inferential statistics used include correlational and multiple regression analysis.

3.7.4.1 Correlation Analysis

Spearman's rho correlation analysis was performed to determine whether there is a relationship between the dependent and each independent variable and the direction and strength of the relationship. The correlation coefficient value from this analysis was determined as the measure of association between two variables where the coefficient should always fall between +1 and -1 (Cooper & Schindler, 2014). A coefficient of -1 means that the variables are negatively correlated, 0 means that there exists no relationship between the variables and +1 means that the variables are positively correlated (Cooper & Schindler, 2014).

3.7.4.2 Multiple Regression Analysis

After conducting a correlational analysis and concluding there is a relationship between variables, a multiple regression analysis was conducted. In this, a relationship model is hypothesized in the form $Y = \beta_0 + \beta_1 X + \varepsilon$ where β_0 and β_1 are model parameters and ε is the probabilistic error term that explains any variability in the dependent variable that cannot be explained by X.

The regression equation was proposed as follows:

$$\boldsymbol{Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon},$$

Where:

Y was the dependent variable (Relevance of Universities)

β_0 was the model intercept

β's were the coefficients of independent variables

X's were the independent variables (X_1 – Systems, X_2 – Structures, X_3 – Value Proposition and X_4 - Industry Linkages.

ε was the error term

3.7.4.3 Diagnostic tests

The following tests were performed to test how the model fits our data prior to the multiple regression: multi-collinearity, heteroscedasticity, test for autocorrelation, and test for normality.

Multi-collinearity refers to situations where there is a high correlation between independent variables in our model, which results in a high coefficient of determination. Variance inflation factor (VIF) was used to test whether the presence of multi-collinearity is statistically significant. VIF < 10 for the research to conclude that the presence of multi-collinearity is not statistically significant.

Heteroscedasticity Tests such as the Breusch-Pagan test or the White test examine whether the variance of the residuals is constant across all levels of the independent variables.

The Durbin-Watson statistic tests for the presence of autocorrelation in the residuals. Values around 2 suggest no autocorrelation, while values significantly different from 2 may indicate an issue.

A histogram was used to check for normality by having a normality curve drawn on the histogram. If the histogram is well covered by the normality density curve, it implies the data is normal.

3.8 Ethical Considerations

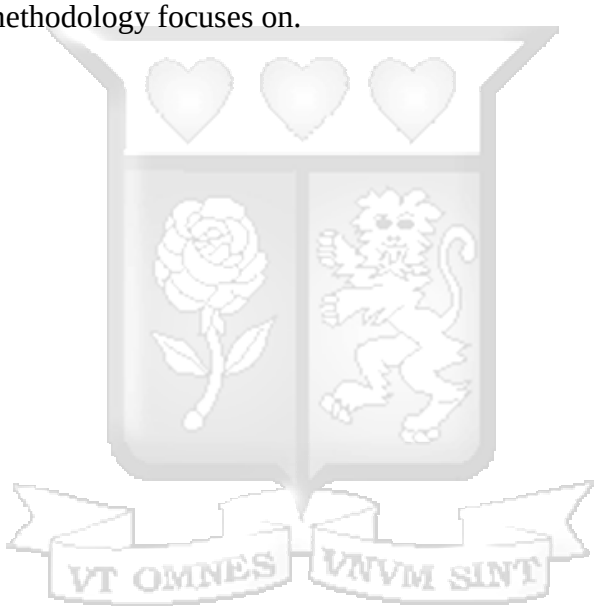
To perform the study, approval from the National Council for Science, Technology, and Innovation (NACOSTI) as well as the Strathmore Ethical Clearance Committee was sought. Employees from the Higher Learning Institutions and organizations partnering with them participated in the study. The employees who acted as the survey's respondents were provided a confidentiality form to sign, giving their approval to participate in the study. No other study participants were given access to the respondents' data over the course of the investigation. Thus, both professional and research ethics were upheld.

3.9 Limitations to The Study

It is necessary to acknowledge certain shortcomings inherent in the research design, such as possible bias in self-reported data and constraints of generalizability due to the specific context of Nairobi, Kenya. Notwithstanding these limitations, the empirical outcomes were expected to underwrite significantly to the strategic alignment of universities to the industry demands.

3.10 Chapter Summary

This chapter has outlined the research's methodology. Research design, target population, sampling design, means of data collection, data analysis, and ethical issues are just a few of the specific aspects that the methodology focuses on.



CHAPTER FOUR
PRESENTATION OF FINDINGS

4.1 Introduction

The study sought to evaluate how industry-led programs contribute to university relevance. Secondary data and primary data were collected and analyzed using both qualitative and quantitative statistical tools. In this chapter, the findings of the analysis are presented using text, tables, and figures.

4.2 Response Rate

The study targeted a sample size of 198 respondents, 150 respondents (strategy officers, business development managers, and faculty) were selected to fill out questionnaires, and 48 participants (deans and academic directors) were targeted for focus-group interviews. Out of the 150 distributed questionnaires, 112 were completed and returned on time for analysis. Four questionnaires were ruled out for incompleteness and errors, implying that 108 filled questionnaires were eligible for analysis. 37 out of 48 targeted deans and academic directors agreed to participate in the interviews. Therefore, the overall response rate was 73.23% as highlighted in Table 4.1, which is a sufficient response according to Nulty's (2008) standards for an adequate response rate.

Table 4. 1: Response Rate

Category	Frequency	Percentage
Responded	145	73.23
Non-response	53	26.77
Total	**198**	**100**

4.3 Respondent Characteristics

Demographic analysis was performed to determine the demographic characteristics of the participants. This included gender, age distribution, job category, and experience. The findings are shown in Table 4.2. Out of 145 participants, the bulk of them were male (59.31%), were in the 41-

50 age group (49.66%), were business development managers (30.34%), and had 5-10 years of experience in their respective institutions (51.03%).

Table 4. 2: Respondent Characteristics (n=145)

Characteristics	Distribution	Frequency	Percentage
Gender	Male	86	59.31%
	Female	59	40.69%
Age (years)	<30	4	2.76%
	31-40	28	19.31%
	41-50	72	49.66%
	50>	41	28.28%
Job Category	Strategic officer	29	20.00%
	Business development manager	44	30.34%
	Faculty	35	24.14%
	Academic director	13	8.97%
	Dean	24	16.55%
Experience (years)	<5	12	8.28%
	5-10	74	51.03%
	10-15	42	28.97%
	15>	17	11.72%

4.4 Reliability Tests

The Cronbach's Alpha test was performed to check for the internal consistency of the research instrument. The values on Cronbach's Alpha scale, α, usually range from 0 to 1. The general rule of thumb is that a value of 0.7 or greater is desirable; anything else is unacceptable (Taber, 2018). Results, as presented in Table 4.3, show that all the variables achieved the recommended Cronbach's Alpha Threshold. Therefore, the research instrument was reliable.

Table 4. 3: Reliability Tests

Constructs	Cronbach's Alpha	N of Items
University relevance	.935	5
Industry linkages	.910	5
Systems	.825	4
Organizational structures	.903	5
Value proposition	.827	4

4.5 Descriptive Statistics

4.5.1 University Relevance

The study sought to collect primary and secondary data on university relevance. Findings from secondary data varied across the six universities. For instance, 2023 annual enrollment was as follows: 67,905 at KU, 36,251 at UoN, 6547 at Daystar University, 5,792 at USIU, 5,047 at Strathmore University, and 2,000 at Riara University. Findings on graduate employability across the six universities were as follows: UoN at 38.6%, KU at 30%, USIU at 6.2%, and Strathmore University at 5.8%. There was no data on Riara University and Daystar University. As far as university rankings are concerned, UoN is the best university in Kenya (8th in Africa), KU comes second (38th in Africa), Strathmore University is 4th (68th in Africa), Daystar is 15th (248th in Africa), USIU is ranked 30th (372nd in Africa), and Riara University ranked 39th (496th in Africa).

Interviews were held with the academic directors and deans on student enrollment, graduate employability, and student satisfaction. The following were the common themes that emerged from the interviews. Most of the interviewees thought that the admission rate for the institutions was sufficient. However, they felt that "*there is still room for improvement*." The interviewers were also of the opinion that their respective institutions had excellent student satisfaction rates with comments such as "*I think our students are happy with what we offer*" being common. However, a notion of skepticism could be noticed among the interviewees regarding the adequacy of graduate employability. Some of them felt universities do not produce an adequate number of employable graduates.

Questionnaires were also used to gather primary data on university relevance. Data was measured using a five-point Likert scale where 1=strongly disagree, 2 = disagree; 3 = neither agree nor

disagree; 4 = agree; 5 = strongly agree. Table 4.4 illustrates how the participants responded to the items on the questionnaire.

Table 4. 4: University Relevance

	1 f (%)	2 f (%)	3 f (%)	4 f (%)	5 f (%)	Mean	SD
In my opinion, this university has a growing demand for educational programs and services.	0 (0)	0 (0)	11 (10.2)	57 (52.8)	40 (37.0)	4.269	.6355
I believe the institution has a reasonable level of financial sustainability to meet its needs.	0 (0)	15 (13.9)	35 (32.4)	45 (41.7)	13 (12.0)	3.519	.8805
I believe that the institution is relatively popular and well-recognized by all Kenyans.	0 (0)	0 (0)	17 (15.9)	51 (47.2)	40 (37.0)	4.213	.6978
I am of the view that various stakeholders, including students, faculty, staff, and the general public, are happy with this institution.	0 (0)	4 (3.7)	10 (9.3)	58 (53.7)	36 (33.3)	4.167	.7426
I would highly recommend this learning institution to others.	0 (0)	6 (5.6)	8 (7.4)	41 (38.0)	53 (49.1)	4.306	.8368
Overall Mean						**4.094**	**.7586**

The overall mean for university relevance was 4.094 at 0.7586 standard deviation. This implies that the majority of the respondents agreed that the universities examined are relevant. The item, "I would highly recommend this learning institution to others" had the highest mean, 4.306 at 0.8368 standard deviation which implies that most of the respondents (87.1%) would recommend their respective universities. However, the item, "I believe the institution has a reasonable level of financial sustainability to meet its needs" had the lowest mean, 3.519 at 0.8805 denoting neutrality among the respondents on the institutions having a reasonable level of financial sustainability.

4.5.2 Industry Linkages

Primary and secondary data on industry linkages programs and practices was also obtained. UoN had the most industry linkages at 252 MOUs across its ten faculties with the greatest number of linkages being in the faculty of business and management sciences at 50 local and international partnerships and linkages worth USD 4.9 million. KU has over 100 formal and active linkages with various organizations worldwide. USIU had nine formal industry partnerships and collaborations and Strathmore University had 64 active partnerships. Riara University had official 22 industry partners with Daystar University at ten active industry collaborations.

Thematic analysis of the interviews on industry linkages revealed the following themes: first, universities enter into long-term cooperations with industries for mutual benefit. Universities can collaborate directly with industry partners or through the government and the linking party. According to the interviewees, this enables universities to design tailored curricula to cater to the specific knowledge and skills of those industries. Universities benefit from the collaboration in terms of resources and enhancing the employability of graduates. Most of the interviewees felt that "*the strength of the collaboration is still weak*" due to the preexisting barriers. However, the interviewees admitted to committing to sustain these partnerships by exploring various collaborative communication avenues such as seminars, conferences, emails, research, exchange programs, and more.

Structured questionnaires were also used to collect primary views on industry linkage practices and data measured using a five-point Likert scale where 1=strongly disagree, 2 = disagree; 3 = neither agree nor disagree; 4 = agree; and 5 = strongly agree. Table 4.5 illustrates how the participants responded to the items on the questionnaire.

Table 4. 5: Industry Linkages

	1 **f (%)**	**2** **f (%)**	**3** **f (%)**	**4** **f (%)**	**5** **f (%)**	**Mean**	**SD**
From my observation, meetings, workshops, trade fairs, exhibitions, conferences, etc. are held between this	0 (0)	9 (8.3)	24 (22.2)	55 (50.9)	20 (18.5)	3.796	.8401

institution and the industry for the purpose of networking and collaboration.							
I believe there is an exchange of personnel (lecturers and industry members) between the two sectors as part of the university-industry partnership.	4 (0)	19 (13.9)	37 (34.3)	38 (35.2)	10 (9.3)	3.287	.9864
I believe that training for industrial personnel, student placement, internships, and joint student supervision are provided as part of the ongoing industry-university collaboration.	0 (0)	0 (0)	18 (16.7)	57 (52.8)	33 (30.6)	4.139	.6761
I am of the opinion that the sectors create employment opportunities for one another. For example, graduates and researchers for the industry and representations of the industry in higher education boards.	0 (0)	10 (9.3)	27 (25.0)	55 (50.9)	16 (14.8)	3.713	.8322
I believe that the institution and the industry maintain proper and consistent communication via various channels, including emails, emails, conference calls, graduation invitations, etc.	9 (8.3)	28 (25.9)	34 (31.5)	37 (34.3)	0 (0)	2.917	.9679
Overall Mean						**3.570**	**.8605**

The overall mean for the industry linkage variable was 3.570 at 0.8605 standard deviations. This finding implies a sense of neutrality among the respondents regarding partnership practices between universities and industries. Nevertheless, the item, “I believe that training for industrial personnel, student placement, internships, and joint student supervision is provided as part of the ongoing industry-university collaboration” had the highest mean 4.139 at 0.6761 standard deviations. This implies that respondents agreed that their institutions offer training as a critical part of university-industry collaboration. However, item, “I believe that the institution and the industry maintain proper and consistent communication via various channels, including emails,

emails, conference calls, graduation invitations, etc." had the lowest mean 2.917 at 0.9679 standard deviation. This implies that most of the respondents either disagreed or were neutral on universities maintaining proper and consistent communication with industry partners.

4.5.3 Systems

The study also sought to collect primary and secondary data on the systems universities use. Secondary data on systems efficiency was examined by collecting by looking into turnaround times (TATs) (or service delivery) for the six universities. The study examined the customer service charters for each university. The timelines for service deliveries in the following areas were almost the same: student orientation, response to inquiries, response to complaints, student welfare services, admissions, and exam evaluation were the same. However, private institutions (Strathmore, USIU, Daystar, and Riara) are more efficient with quicker TATs than their public counterparts (UoN and KU).

Results from the interviews point towards the following narrative: universities rely on systems to facilitate key institutional operations such as online and hybrid learning, library services, finance and accounting, student management, examination management, research, and more. The following comment was common among the interviewees, "*systems enable the institution to run more efficiently*." However, the interviewees felt that the rate of systems adoption is underwhelming, especially in public universities mostly due to "*budgetary constraints*" and bureaucratic limitations. Nevertheless, the interviewees thought that systems are essential in enhancing the relevance of universities through effective management, increased collaboration, improved efficiency, immersive learning experiences, and enhanced organizational flexibility.

Primary data on the variables was also collected via questionnaires and measured using a five-point Likert scale where 1=strongly disagree, 2 = disagree; 3 = neither agree nor disagree; 4 = agree; and 5 = strongly agree. Table 4.6 illustrates how the participants responded to the items on the questionnaire.

Table 4. 6: Systems

	1 f (%)	2 f (%)	3 f (%)	4 f (%)	5 f (%)	Mean	SD
I am under the impression that this university has a capable student information system (SIS) that manages student data, including registration, enrolment, attendance, grading, etc. effectively.	0 (0)	0 (0)	6 (5.6)	72 (66.7)	30 (27.8)	4.222	.5354
I think that the current learning management system (LMS) is capable in administering, documenting, tracking, automating, and delivering learning.	0 (0)	9 (8.3)	34 (31.5)	51 (47.2)	14 (13.0)	3.648	.8125
I submit that the present enterprise resource planning (ERP) system is designed to sufficiently integrate and manage organization-wide functions (HR, finance, procurement, etc.) efficiently.	0 (0)	5 (4.6)	20 (18.5)	64 (59.3)	19 (17.6)	3.898	.7355
I believe that the customer relationship management (CRM) system in place is advanced enough to enable the university to manage interactions with its stakeholders (industry experts, prospective students, alumni, donors, etc.) more effectively.	5 (4.6)	13 (12.0)	22 (20.4)	56 (51.9)	12 (11.1)	3.528	.9996
Overall Mean						**3.824**	**.7707**

The overall mean for the systems variable was 3.824 at 0.7707 standard deviation implying that the respondents remained neutral on the status of systems at the universities studied. The item, “I am under the impression that this university has a capable student information system (SIS) that manages student data, including registration, enrolment, attendance, grading, etc. effectively” had the highest mean of 4.222 at 0.5354 standard deviations. This means that the respondents were of the opinion that SISs deployed were capable of meeting their expected needs. However, item “I

believe that customer relationship management (CRM) system in place is advanced enough to enable the university to manage interactions with its stakeholders (industry experts, prospective students, alumni, donors, etc.) more effectively" had the lowest mean of 3.528 at 0.9996 standard deviation. This implies that they remained neutral on whether the CRM in place was advanced enough to meet the needs of the organizations.

4.5.4 Organizational Structures

The study also sought to collect data on organizational structure and its implications on university relevance. Secondary data on organization charts adopted by the universities and leadership was obtained and the following are the findings. All the universities adopt a functional hierarchical organizational structure as observed on organizational charts. There is a clear line of authority with the chancellor sitting at the top of the hierarchy. Reporting to the chancellor is a vice-chancellor and several deputy vice-chancellors (DVCs) below him.

Interviews were also conducted on the status of the organizational structure across the six institutions and how they contribute to the relevance of the universities. Interviewees described organizational structures as "*centralized*" and "*functional*" with a "*hierarchical chain of command*" where a chancellor sits at the top. Most of the interviewees were of the opinion that since there is clarity of roles and responsibilities with a defined chain of command, this structure contributes to university relevance through increased productivity, quality decision-making, and increased specialization within faculties and departments.

Primary data on the organizational structures variable was also collected via questionnaires and measured using a five-point Likert scale where 1=strongly disagree, 2 = disagree; 3 = neither agree nor disagree; 4 = agree; and 5 = strongly agree. Table 4.7 illustrates how the participants responded to the items on the questionnaire.

Table 4. 7: Organizational Structures

	1 f (%)	2 f (%)	3 f (%)	4 f (%)	5 f (%)	Mean	SD

Having interacted with the structure of the university, I can confirm that there is a clear line of authority.	0 (0)	6 (5.6)	15 (13.9)	58 (53.7)	29 (26.9)	4.019	.7970
It is my opinion that the structures of the university are designed to support strong and effective leadership.	9 (8.3)	29 (23.1)	53 (49.1)	21 (19.4)	0 (0)	2.796	.8512
From my observation, I can ascertain that there is a proper delegation of authority at various levels of the institution.	3 (2.80)	24 (22.2)	39 (36.1)	39 (36.1)	3 (2.8)	3.139	.8908
I believe the organization's structures are designed to enable the university to adapt to the changing educational landscape.	8 (7.4)	30 (27.8)	40 (37.0)	30 (27.8)	0 (0)	2.852	.9152
I strongly believe that the structures were founded and operate on a sense of shared values and principles.	2 (1.9)	20 (18.5)	38 (35.2)	44 (40.7)	4 (3.7)	3.259	.8687
Overall Mean						**3.213**	**.8646**

The overall mean for the organizational structures variable was 3.213 at 0.8646 standard deviation. This implies that respondents remained neutral on the status and significance of the organizational structures of the universities. The statement, “Having interacted with the structure of the university, I can confirm that there is a clear line of authority” had the highest mean of 4.019 at 0.7970 standard deviation. This implies that respondents most respondents (80.6%) confirmed that organizational structures in place had a clear line of authority. However, the statement, “It is my opinion that the structures of the university are designed to support strong and effective leadership” had the lowest mean of 2.796 at 0.8512 standard deviation. This implies that most respondents were not of the opinion that the structures are designed to support strong and effective leadership.

4.5.5 Value Proposition

The study also sought to collect data on the value proposition of the universities involved in the study. Both primary and secondary data were collected. Findings from secondary data revealed

that UoN offers a diverse range of programs in 60 different teaching departments and 10 faculties. KU has 69 departments with seven faculties; Strathmore University has seven faculties and ten research centers; Riara University has six faculties, USIU also has six faculties, and Daystar University has seven faculties. All the Universities offer

Interviews were conducted on the value of the programs offered, learning experiences, bridging the gap with workforce development, and the amount of change needed to deliver value. Interviewees revealed that "*the programs we offer resonate and add value to our target students*" and stated that learning experiences were satisfactory, especially with the gradual addition of advanced learning tools. Respondents also felt that the programs offered help bridge the gap between the academic sector and workforce development. One interviewee stated, "*We try to stay steps ahead by understanding market trends and modifying existing courses or introducing new ones in order to adapt to the changing dynamics of employment*." All the interviewees admitted to taking more than expected to implement change mostly due to bureaucratic complexities with public universities being the worst affected.

Primary data on the value proposition variable was also collected via questionnaires and measured using a five-point Likert scale where 1=strongly disagree, 2 = disagree; 3 = neither agree nor disagree; 4 = agree; and 5 = strongly agree. Table 4.8 illustrates how the participants responded to the items on the questionnaire.

Table 4. 8: Value Proposition

	1 **f (%)**	**2** **f (%)**	**3** **f (%)**	**4** **f (%)**	**5** **f (%)**	**Mean**	**SD**
I strongly believe that the value the university promises to deliver is relevant and important to the potential stakeholders, including students.	0 (0)	7 (6.5)	24 (22.2)	73 (67.6)	4 (3.7)	3.685	.6506
I think that the value the institution promises to deliver fills a need and comes with several benefits.	0 (0)	1 (0.9)	17 (15.7)	67 (62.0)	23 (21.3)	4.037	.6402

I believe the value the institution promises is unique and differentiated from what other universities offer.	3 (2.8)	19 (17.6)	48 (44.4)	34 (31.5)	4 (3.7)	3.157	.8556
It is my understanding that the value proposition is more than a promise; the value can be substantiated.	3 (2.8)	20 (18.5)	39 (36.1)	42 (38.9)	4 (3.7)	3.222	.8895
Overall Mean						**3.526**	**.7590**

The overall mean for the value proposition variable was 3.526 at 0.7590 standard deviation implying that respondents, in general, remained neutral on the value promised by the universities. The statement, "I think that the value the institution promises to deliver fills a need and comes with several benefits" had the highest mean of 4.037 at 0.6402 standard deviation meaning that most respondents (83.3%) agreed that the value the institution promises to deliver fills a need and are beneficial. However, the item, "I believe the value the institution promises is unique and differentiated from what other universities offer" scored the lowest mean implying a sense of neutrality among the respondents on how the institutions feature differentiated value propositions.

4.6 Inferential Statistics

The study performed inferential statistics to make estimates, approximations, generalizations, inferences, and conclusions about the population based on the sample data. A variety of inferential statistics tests were applied, including correlation analysis, which was used to examine the extent of correlation between the independent and dependent variables. Before then, normality tests were first carried out.

4.6.1 Normality Test

The data set was tested for normal distribution to determine whether to perform parametric or nonparametric tests for correlational analysis. Parametric tests are applied where data is normally distributed and nonparametric tests are used when data does not follow normal distribution. The study performed a Kolmogorov–Smirnov test on the constructs because of sample size was more than 100. Based on the findings, as shown in Table 4.9, all the constructs do not follow normal

distribution since they are not statistically significant (Sig. < .05). Further analysis also reveals that all the constructs were skewed. Therefore, the study proceeded with nonparametric tests.

Table 4. 9: One-Sample Kolmogorov–Smirnov Test

	N	Mean	Std. Deviation	Skewness	Kurtosis	K-S	Asmp. Sig.
University relevance	108	4.094	.68055	-.570	-.203	.138	.000
Industry linkages	108	3.570	.74373	-.523	-.356	.108	.003
Systems	108	3.824	.63876	-.626	.122	.167	.000
Organizational structures	108	3.213	.73435	-.761	.047	.184	.000
Value proposition	108	3.526	.62272	-.628	.170	.178	.016

4.6.2 Correlational Analysis

Correlation analysis, in this case, Spearman's rank correlation analysis, was performed to determine the direction and strength of how each independent variable correlates with the dependent variable. The study performed Spearman's rank correlation analysis, a nonparametric test because all the constructs did not follow normal distribution.

4.6.2.1 Industry Linkages and University Relevance

The first objective of the study was to determine the influence of university-industry partnerships on university relevance. Spearman's rank correlation analysis was performed to test the correlation and the results are shown in Table 4.10.

Table 4. 10: Industry Linkages and University Relevance

			University relevance	Industry linkages
Spearman's rho	University relevance	Correlation Coefficient	1.000	.604**
		Sig. (2-tailed)	.	.000

		N	108	108
	Industry linkages	Correlation Coefficient	.604**	1.000
		Sig. (2-tailed)	.000	.
		N	108	108

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

A positive and significant correlation (r=.604) was detected between university relevance and industry linkages. The finding suggests that an increase in university-industry collaboration results in a significant increase in university relevance. Therefore, the study rejected the null hypothesis at a 95% confidence level and 5% significance level and concluded that the correlation between university relevance and industry linkages is statistically significant.

4.6.2.2 Systems and University Relevance

The second objective of the study was to determine the influence of systems on university relevance. Spearman's rank correlation analysis was performed to test the correlation and the results are shown in Table 4.11.

Table 4. 11: Systems and University Relevance

			University relevance	**Systems**
Spearman's rho	University relevance	Correlation Coefficient	1.000	.214**
		Sig. (2-tailed)	.	.026
		N	108	108
	Systems	Correlation Coefficient	.214**	1.000
		Sig. (2-tailed)	.026	.
		N	108	108

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

A positive and significant correlation (*r*=.214) was detected between systems and university relevance. The finding suggests that an improvement in systems results in a significant increase in university relevance. Therefore, the study rejected the null hypothesis at a 95% confidence level and 5% significance level and concluded that the correlation between systems and university relevance is statistically significant.

4.6.2.3 Organizational Structures and University Relevance

The third objective of the study was to determine the influence of organizational structures on university relevance. Spearman's rank correlation analysis was performed to test the correlation and the results are shown in Table 4.12.

Table 4. 12: Organizational Structures and University Relevance

			University relevance	Organizational structures
Spearman's rho	University relevance	Correlation Coefficient	1.000	.200**
		Sig. (2-tailed)	.	.038
		N	108	108
	Organizational structures	Correlation Coefficient	.200**	1.000
		Sig. (2-tailed)	.038	.
		N	108	108

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

A positive and significant correlation (*r*=.200) was detected between organizational structures and university relevance. The finding suggests that an improvement in organizational structure leads to a significant increase in university relevance. Therefore, the study rejected the null hypothesis at a 95% confidence level and 5% significance level and concluded that the correlation between organizational structure and university relevance is statistically significant as the findings suggest.

4.6.2.4 Value Proposition and University Relevance

The fourth objective of the study was to determine the influence of value proposition on university relevance. Spearman's rank correlation analysis was performed to test the correlation and the results are shown in Table 4.13.

Table 4. 13: Value-Proposition and University Relevance

			University relevance	Value proposition
Spearman's rho	University relevance	Correlation Coefficient	1.000	.271**
		Sig. (2-tailed)	.	.005
		N	108	108
	Value proposition	Correlation Coefficient	.271**	1.000
		Sig. (2-tailed)	.005	.
		N	108	108

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

A positive and significant correlation (r=.271) was detected between value proposition and university relevance. The finding suggests that an increase in value proposition results in a significant increase in university relevance. Therefore, the study rejected the null hypothesis at a 95% confidence level and 5% significance level and concluded that the correlation between university relevance and value proposition is statistically significant.

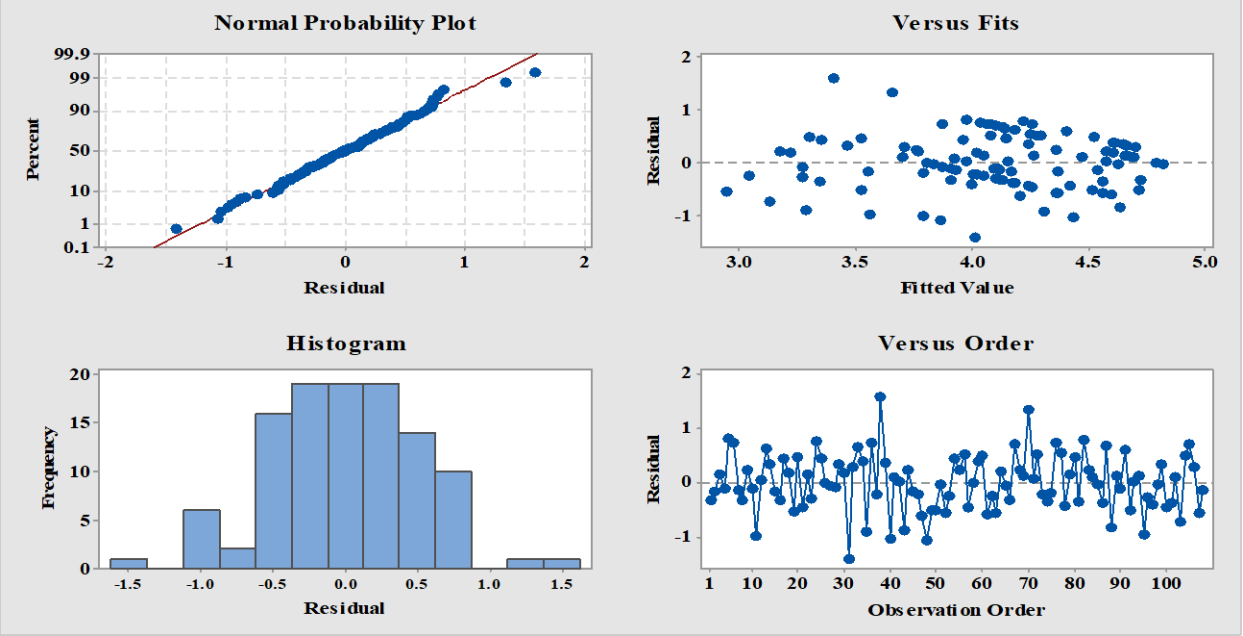
4.6.3 Diagnostic Tests

Diagnostic tests were performed to check for the appropriateness of the regression model before proceeding to multiple regression analysis. These tests were performed to check if the underlying assumptions of the model hold. They include the test for heteroscedasticity, the test for normality, the test for autocorrelation, and the test for multi-collinearity.

4.6.3.1 Test for Heteroscedasticity

The test for heteroscedasticity was performed to check for the presence of heteroskedasticity. The presence of heteroskedasticity invalidates the statistical tests of significance. The results of the test as shown in Figure 4.1 confirm that there is no relationship between the residuals and fitted values of the dependent variables. Therefore, heteroskedasticity (LM stat = .05, p > .05) was not a concern.

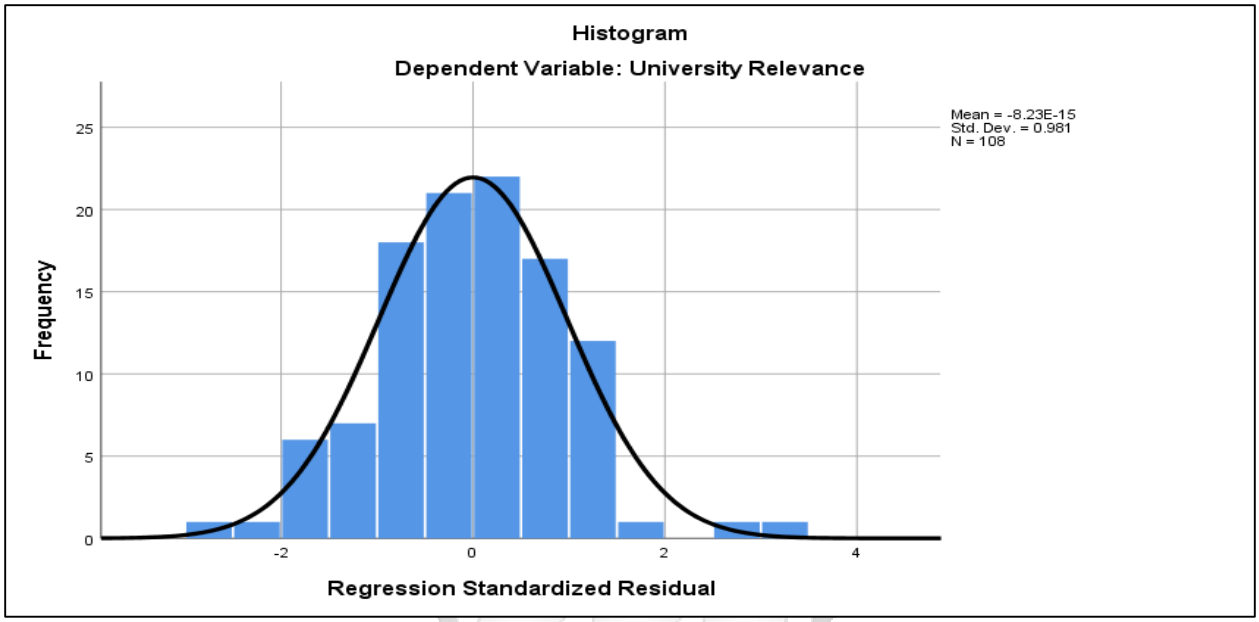
Figure 4. 1: Residuals Plot for University Relevance



4.6.3.2 Test for Normality

The test for normality was performed with the aid of a histogram on the normality curve to have a visual representation of the distribution of the residuals. The normality assumption must be fulfilled in order to obtain the best linear unbiased estimator. Usually, if the histogram is covered by the normality curve, it means the normality assumption is fulfilled. As shown in Figure 4.2, the normality test confirms that the residuals followed a normal distribution.

Figure 4. 2: Test for Normality



4.6.3.3 Test for Autocorrelation

The study performed the Durbin-Watson (DW) test to check for autocorrelation, which is the situation where the residuals in a regression model are correlated. Autocorrelation has an adverse effect on the regression model. The test usually produces a value ranging from 0 to 4. If the value falls between 1.5-2.5, no autocorrelation is detected; a value below 1.5 shows a positive autocorrelation and a value above 2.5 shows a negative autocorrelation. As shown in Table 4.14, with a DW statistic of 2.065, no autocorrelation was detected. This is further proven by $D < D_U$ and $D > D_L$.

Table 4. 14: Test for Autocorrelation

Alpha	.05
D-stat	2.06523
D-lower	1.8973
D-upper	2.139
Sig	**No autocorrelation**

4.6.3.4 Test for Multicollinearity

The test for multi-collinearity was also performed to determine whether the independent variables were related. The test performed was the variance inflation factor (VIF), which helped determine the presence of multi-collinearity and its statistical significance. Usually, if the VIF value is less than 10, the presence of multi-collinearity is not statistically significant. As shown in Table 4.15, VIF < 10 implies that multi-collinearity is not statistically significant.

Table 4. 15: Test for multi-collinearity

		Collinearity Statistics	
Model		**Tolerance**	**VIF**
1	(Constance)		
	Industry linkages	.773	1.293
	Systems	.821	1.218
	Organizational structure	.610	1.639
	Value proposition	.581	1.721

a. Dependent Variable: University Relevance

4.6.4 Regression Analysis

The study performed multiple regression analysis to further determine the functional relationship between the independent variables (industry linkages, systems, organizational structures, and value proposition) and the dependent variable, university relevance. Table 4.16 shows the model summary of the analysis. As the findings suggest, a portion of the variance (R Square = .423) in university relevance was attributed to the four variables. In other words, industry linkages, systems, organizational structures, and value propositions explained 42.3% of university relevance.

Table 4. 16: Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.650[a]	.423	.400	.52708	2.065

a. Predictors: (Constant), industry linkages, systems, organizational structures, value proposition
b. Dependent Variable: University relevance

The study also performed the analysis of variance (ANOVA) to model the relationship between the variables and demonstrate whether the influence independent variables have is significant. Table 4.17 shows the results from the ANOVA analysis. The model confirms that the collective relationship between the independent variables and dependent variables is statistically significant ($F(4,103) = 5.235$, $P<0.01$)

Table 4. 17: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20.941	4	5.235	18.845	.000[b]
	Residual	28.615	103	.278		
	Total	49.557	107			

a. Dependent Variable: University relevance

b. Predictors: (Constant), industry linkages, systems, organizational structures, value proposition

Moreover, the study performed a regression coefficient to statistically measure the functional relationship between the dependent variable (university relevance) and the four independent variables (industry linkages, systems, organizational structures, and value proposition). The analysis also measures whether the functional relationship is significant or not. The results in Table 4.18 show the relationship between the variables.

Table 4. 18: Coefficients[a]

		Unstandardized Coefficients			
Model		**β**	**Std. Error**	**t**	**Sig.**
1	(Constant)	1.703	.384	4.439	.000
	Industry linkages	.554	.078	7.114	.000
	Systems	.019	.088	.217	.828

Organizational structures	.010	.089	.118	.906
Value proposition	.087	.107	.806	.422

a. Dependent Variable: University relevance

As the findings suggest, the industry linkages variable is a positive and statistically significant predictor of university relevance, as proven by (β = .554, t = 7.114, p<0.05). This finding means that a 1% improvement in industry linkages increases university relevance by 0.554%. Systems have a positive but non-significant influence on university relevance as shown by safety (β = .019, t = .217, p>0.05). An improvement in systems by 1% would enhance university relevance by 0.019%. The organizational structures variable has a positive but non-significant effect on university relevance (β = .010, t = .118, p>0.05) implying that improving structures by 1% leads to a 0.01% increase in university relevance. Lastly, value proposition also has a positive but non-significant influence on university relevance (β = .087, t = .806, p>0.05) meaning improving value proposition by 1% leads to 0.087% increase in university relevance.

Therefore, the final regression model would be as follows:

$$University\ relevance\ =\ 1.703\ +\ .554X_1 +\ .0.9X_2 + .010X_3\ +\ .087X_4$$

Where;

X_1= Industry linkages

X_2= Systems

X_3= Organizational structures

X_4= Value proposition

4.6.5 Moderating Effect of Reputation

The study performed hierarchical multiple regression analysis to determine whether and the extent to which university reputation moderates the relationship between industry-led programs and university relevance. Table 4.19 compares the findings of the coefficients of the regression model with university reputation as a moderating variable. As shown in the table, university reputation

has a moderating effect on the relationship between industry-led programs and university relevance.

Table 4. 19: Moderating Effect of Reputation

	Without moderating variable			With moderating variable		
	B	**t**	**Sig.**	**B**	**t**	**Sig.**
(Constant)	1.703	4.439	.000	1.544	2.360	.020
Industry linkages	.554	7.114	.000	.555	7.088	.000
Systems	.019	.217	.828	.018	.204	.838
Organizational structure	.010	.118	.906	.007	.080	.936
Value proposition	.087	.806	.422	.088	.819	.415

a. Dependent Variable: University relevance

CHAPTER FIVE
SUMMARY, DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

This chapter offers a summary of the main points of the research study and accompanies it with an in-depth interpretation and discussion of the findings. Also covered in this chapter are the conclusion of the study, recommendations for practice, limitations encountered in completing the study, and suggestions for future research.

5.2 Summary

The purpose of this study was to determine how industry-led programs contribute to university relevance and the moderating effect of university reputation. The study focused on industry linkages, systems, organizational structures, and value propositions which made for the dependent variable with university relevance being the dependent variable and university reputation the moderating variable. The study was underpinned by the principles of institutional theory and resource-based theory. A positivist research philosophy was followed and a descriptive research design was adopted. The target population comprised practitioners of the selected universities from whom a sample of 198 respondents was selected using purposive and cluster sampling. Interviews and questionnaires were used to collect data and thematic, descriptive, and inferential analyses were used for data analysis.

A total of 150 questionnaires were distributed to the targeted respondents and 48 participants were invited for interviews. 112 Questionnaires were completed and returned on time for analysis. However, four of them were ruled out for non-completion and errors implying 108 questionnaires were eligible for analysis. On the other hand, 37 out of 48 participants invited for the interview agreed to participate. Overall, the overall response rate was 73.23% which was satisfactory. The bulk of the study's participants were male (59.31%), were in the 41-50 age group (49.66%), were business development managers (30.34%), and had 5-10 years of experience in their respective higher learning institutions (51.03%).

Findings on the university relevance variable suggest that KU has the highest student enrollment rate of the six universities. However, UoN has the highest graduate employability rate and is

ranked the best overall university in Kenya. Interviewees were of the view that student enrollment rates in their respective institutions were sufficient but felt that there was room for improvement. They also suggested that student satisfaction was high across the six universities. Descriptive statistics revealed an overall mean score of (M=4.094, SD=.7586), suggesting respondents generally agreed that universities featured in the study are relevant.

Findings on the industry linkages reveal that universities featured collaborate with various industry partners in different capacities as denoted by the number and nature of MOUs between the universities and industries. As interviewees confirmed, universities enter into partnerships to improve their marketability by tailoring programs for those industries which as a result, enhances their graduate employability. However, they felt that the status of partnerships between universities and industries is underwhelming due to certain underlying challenges. This view was confirmed by findings from descriptive statistics which revealed a mean score of (M=3.570, SD=.8605) which suggests that respondents chose to remain neutral on the subject of industry linkages.

The results of the analysis of data on the systems variable showed that the efficiency of systems, measured by turnaround times was not much different across the six universities. However, private institutions had slightly better timelines than public institutions denoting higher efficiency. Findings from the interview also point out that systems are held in high regard and enhance university relevance in a variety of effective ways. However, the pace of adopting systems was slow mainly because of budgetary issues and bureaucratic limitations. Descriptive statistics further suggest that respondents choose to remain neutral (M=3.824, SD=.7707).

Organizational structures are also similar across the six universities; they are hierarchical and complex but functional. Interviewees described these structures as centralized and functional, empowering quality decision-making and productivity. However, their limitations are their complexity and bureaucratic nature. Findings from descriptive statistics are in line with the view above; respondents generally remained neutral on the organizational structures of their respective institutions as shown by (M=3.213, SD=.8646).

Secondary data analysis on value proposition showed that UoN offers the greatest number of programs across ten faculties. The thematic analysis also indicated that interviewees believe the programs they offer are relevant and add value to their target markets. They admitted to taking the necessary steps to ensure universities adapt to the changing market. However, they cited

universities being slow to change as far as implementing value propositions is concerned. Descriptive statistics also confirmed respondents remaining neutral on the value proposition as shown by (M=3.526, SD=.7590).

5.3 Discussion

5.3.1 Industry Linkages and University Relevance

The first objective of the study was to determine how industry linkages contribute to university relevance. The study first examined the status of university-industry collaboration among Kenya's universities. It was discovered that these partnerships were below expectations due to a number of underlying factors. This observation is consistent with the studies of Sá (2015) Bangi (2020), and Teresa (2022). According to these researchers, the differences in priorities, needs, and cultures between the sectors accompanied by economic upheavals have been proven to impede the success of these linkages. Not only that, mistrust among industry players and low motivation among academicians as well as budgetary constraints are hindrances to successful collaboration.

Correlational statistics (r=.604) and multiple regression analysis (β = .554, t = 7.114, p<0.05) suggest that the industry linkages variable is a significant predictor of university relevance. In other words, improving the strategic collaboration between universities and industries would in turn improve university relevance. The observation above supports the tenets of institutional theory, a theory that focuses on the roles of social, political, and economic systems in which organizations operate and gain efficiency. When the findings are interpreted through the lens of the theory, when pressures and expectations are exerted on institutional constituents such as university-industry partnerships, such practices eventually become a norm, resulting in an efficient and more relevant higher learning institution.

The findings are also consistent with past literature, including Al Weshahi (2022) who suggested that the collaboration between universities and industry actors benefits the relevance of higher learning institutions in Oman. Besides improving student learning outcomes, the benefits of industry linkages are tremendous; they help bridge the gap between academics and industry thereby bridging the gap between theory and practice (Ankrah & Omar, 2015). It gives students the opportunity to apply what they learn in the classroom in the real world. This is because such partnerships give students exposure to real-world applications and industry challenges. University-

industry collaborations have also been shown to drive innovations through expanded access to industry expertise since students enjoy access to prominent personalities and leaders in their respective industries and tap into their wealth of knowledge and experience (Sjöö & Hellström, 2019). Other benefits include spurring economic growth and development, job creation, and the development of a skilled workforce.

5.3.2 Systems and University Relevance

The second objective of the study was to determine how systems influence university relevance. Secondary data and thematic analyses revealed that universities rely greatly on systems for service delivery. Their central purpose is to drive efficiency and improve user experience, especially for students. Quantitative data showed that respondents confirmed that SIS and ERP systems are more capable but were skeptical about LMS and CRM systems. The participants were generally of the view that the status of systems use and adoption is underwhelming, a view that Kamuzora et al. (2015) confirm to be true. According to the scholars, the costs involved in acquiring, implementing, and running advanced systems are often beyond the budgetary limits of most Kenyan universities.

Correlational statistics (r=.214) and multiple regression analysis (β = .019, t = .217, p>0.05) revealed that the systems variable has a moderate but nonsignificant impact on university relevance. This implies that improving systems can lead to a notable and positive change in university relevance. This observation supports the principles of institutional theory in the sense that since the theory holds that an organization is based on a wide range of systems, improving these systems would lead to positive outcomes in organizational performance and outcomes. Therefore, if the system needs are met and improved, universities would be more efficient in delivering services which would in turn translate positively into their ability to be more relevant in the market.

The results are also consistent with previous literature, including Hayati et al. (2021), Al-Ahmad and Alnajjar (2009), and Madonsela (2020). Systems play a crucial role in supporting both the academic and administrative activities of a university. For instance, SIS serves a variety of functions in higher education institutions. Its intended purpose is to manage student data and support administrative tasks in an efficient and streamlined manner in four key areas: academic

activity, advising interactions, transactions, and educational outcomes (Demirkol & Seneler, 2019). MIS, ERP, CRM, and several other enterprise software solutions have also been shown to simplify, streamline, and improve processes across departments (Madonsela, 2020; Hayati et al., 2021). Forward-thinking institutions leverage these systems to enhance communication with students, facilitate collaboration, improve data accuracy, ensure better utilization of resources, enhance productivity, improve student success, and more. In other words, systems improve the competitiveness of a higher learning institution.

5.3.3 Organizational Structures and University Relevance

The third objective of the study was to examine how organizational structures influence university relevance. Secondary data analysis and thematic analysis revealed that, according to organizational charts, structures are similar across the universities. These structures are formal, centralized, hierarchical, and functional. According to interviewees, the structures are designed to improve productivity, ensure quality decision-making, and increase specialization within faculties and departments. The views of the interviewees are validated by Ahmady et al. (2016) who expound on the advantages of a functional organizational structure. However, these structures are often complex and bureaucratic and as such, cause issues such as the inability to adapt to change and ensuring strong leadership as pointed out by respondents.

Correlational statistics (r=.200) and multiple regression analysis (β = .010, t = .118, p>0.05) revealed that organizational structure has a weak and nonsignificant impact on university relevance. In other words, improving organizational structures would lead to a positive change in university relevance but the change would be insignificant. Structures are crucial elements of an institution; therefore, the findings are in line with the tenets of the institutional theory. The theory seeks to explain how an organization's processes, norms, practices, patterns, and structures are connected in the broader social and economic environment. Therefore, interpreting the findings through the lens of the theory, it can be concluded that enhancing organizational structures enhances university relevance in the higher education sector.

The findings also corroborate with previous literature (Cyiza et al., 2022; Torres Zapata, 2019; Mathur & Nair, 2016; Fitria et al. (2017). These studies confirm that a well-organized structure improves relevance. For instance, Torres Zapata (2019) noted that an organizational structure that

mimics corporate governance at URCs promotes better research performance. According to Mathur and Nair (2016), a well-designed structure that clearly defines roles and responsibilities, chains of command, scope of control, decision-making authority, and teams/departments and is also aligned with an organization's needs, goals, and operations, leads to positive outcomes such as efficiency, fostering collaboration, clarifying expectations, increasing accountability, and driving performance.

5.3.4 Value Proposition and University Relevance

The fourth objective of the study was to determine how value proposition contributes to university relevance in Kenya. Secondary data analysis revealed that what the six universities seek to achieve is well articulated in their vision and mission statements. However, UoN has the greatest number of faculties but KU has the greatest number of departments. Therefore, these two institutions offer the most number of programs. However, interviewees felt that their respective institutions offered programs that added value to their students. According to Osterwalder et al. (2015), when creating a value proposition, it is critical to understand the target audience, their needs, and goals. Descriptive statistics show that respondents agreed that the value the universities promise to deliver is beneficial and addresses a need in the market. However, they remained neutral on the uniqueness of the value proposition.

Correlational statistics (r=.271) and multiple regression analysis (β = .087, t = .806, p>0.05) revealed that value proposition has a moderate but non-significant impact on university relevance. In other words, improving the value proposition would lead to a positive change in university relevance. These results correspond with previous literature on the subject, including Ilyas and Osiyevskyy (2022) who produced empirical evidence suggesting that a sustainable value proposition translates positively on firm performance.

A value proposition is a compelling statement that highlights the value and benefits target customers can derive from a product, service, or brand. In the traditional business landscape, crafting or having a powerful value proposition is akin to gaining a competitive advantage (Rau et al., 2017; Forrest et al., 2021). In the higher education sector, having a strong value proposition is crucial in setting a higher learning institution apart from the rest. It has been shown to play a crucial

role in helping an institution attract and retain students, increase enrollment rates, and improve its overall reputation.

5.4 Conclusion

The aim of the study was to evaluate how industry-led programs contribute to university relevance in Nairobi, Kenya. Findings from this study demonstrate that industry linkages, systems, organizational structures, and value propositions all have a positive influence on university relevance. However, among these programs, it is only industry linkages that have a significant influence. The study also observed that university reputation also influences the relationship between industry-led programs and university relevance. Therefore, this research study concludes that industry linkages, systems, organizational structures, and value propositions are predictors of university relevance with university reputation having a moderating effect. Put differently, universities in Nairobi can gain relevance by improving university-industry collaborations, systems, organizational structures, and value propositions.

5.5 Recommendations

The relevance of a higher learning institution relates to the importance, meaningfulness, and pertinence that it earns from its students, employees, and other stakeholders. Generally, when a firm is relevant, it is up-to-date with the latest trends, technologies, and changing customer preferences. Therefore, a university with a sustainable level of relevance can gain a significant competitive advantage in the long run. This study demonstrates that industry-led programs contribute significantly to university relevance. In particular, university-industry collaborations, systems, organizational structures, and value propositions have 42.3% variability in university relevance. What this means is that universities that seek relevance must establish more strategic industry linkages, invest in systems, define their structures, and have better and distinct value propositions.

However, due to the varying impact these factors have as denoted by inferential statistics, universities should pay more attention to industry linkages. The study shows that, despite the significant effect of these collaborations, certain aspects of the industry linkages are still below expectations. More specifically, the two sectors lack proper and consistent communication, and the exchange of personnel and experts between the sectors is underwhelming. This can be

attributed to a variety of barriers, including the differences in priorities, needs, and cultures between the sectors, mistrust among industry stakeholders, low motivation among academicians, and financial constraints. These limitations should be addressed to ensure successful collaborations between universities and industries in order to drive industry relevance.

5.6 Limitations of the Study

The study did not encounter any major shortcomings except for time constraints. The study targeted deans, faculty, academic directors, strategic officers, and business development managers of the selected universities. These are high-ranking officials who are often extremely busy and not easy to access and engage. As such, having them take part in the study involved a tedious and frustrating process of meeting cancellations and having to reschedule meetings, especially for the interviews. Therefore, the data collection process took longer than expected.

5.7 Areas for Further Research

The focus of this research was only on industry linkages, systems, organizational structures, and value proposition and their contribution to university relevance. These four factors explain 42.3% of university relevance as the model summary or regression analysis revealed. This shows that other factors not covered in the study explain the rest of 57.7% of university relevance, which is significant. Therefore, future researchers should attempt to uncover what these factors are and how they contribute to university relevance in Nairobi.

The study was also only limited to six universities (two public universities, two private, and two faith-based higher learning institutions). There are at least 63 recognized universities in Kenya, most of them registered or operating in Nairobi. Therefore, future researchers should expand university coverage to have a much broader view of the higher education sector. This research also proposes surveying institutions other than UoN, KU, Strathmore University, USIU, Riara, and Daystar which have been featured in this study, when furthering research into the topic.

REFERENCES

Abercrombie, A., Sawatzki, D., & Lotenberg, L. D. (2012). Building Partnerships to Build the Best Bones Forever! *Social Marketing Quarterly*, *18*(1), 55–66. https://doi.org/10.1177/1524500411435484

Abugabah, A., & Sanzogni, L. (2010). Enterprise resource planning (ERP) system in higher education: A literature review and implications. *International Journal of Human and Social Sciences*, *5*(6), 395-399.

Ahmady, G. A., Mehrpour, M., & Nikooravesh, A. (2016). Organizational structure. *Procedia-Social and Behavioral Sciences*, *230*, 455-462.

Aksom, H., & Tymchenko, I. (2020). How institutional theories explain and fail to explain organizations. *Journal of Organizational Change Management*, *ahead-of-print*(ahead-of-print). https://doi.org/10.1108/jocm-05-2019-0130

Al-Ahmad, N. M., & Alnajjar, F. J. (2009). The impact of management information systems on organizations performance: a field study at Jordanian universities. *Review of Business Research*, *9*(2), 127-137.

Ali, B. J., & Anwar, G. (2021). Porter's Generic Competitive Strategies and its Influence on the Competitive Advantage. *International Journal of Advanced Engineering, Management and Science*, *7*(6), 42–51. researchgate. https://doi.org/10.22161/ijaems.76.5

Ali, S., Shin, W. S., & Song, H. (2022). Blockchain-Enabled Open Quality System for Smart Manufacturing: Applications and Challenges. *Sustainability*, *14*(18), 11677. https://doi.org/10.3390/su141811677

Aluko, O. R., Idoro, G. I., & Mewomo, M. C. (2020). Relationship between perceived service quality and client satisfaction indicators of engineering consultancy services in building projects. *Journal of Engineering, Design and Technology*, *ahead-of-print*(ahead-of-print). https://doi.org/10.1108/jedt-03-2020-0084

Andersen, H. L. (2022). A Clash of Intentions in Higher Education. *Journal of Higher Education Policy and Leadership Studies*, *3*(3), 108–117. https://doi.org/10.52547/johepal.3.3.108

Anderson, S., & McKenzie, D. (2021). Improving Business Practices and the Boundary of the Entrepreneur: A Randomized Experiment Comparing Training, Consulting, Insourcing and Outsourcing. *Journal of Political Economy*, *3*(5). https://doi.org/10.1086/717044

Andrew Marshall Pettigrew, Cornuel, E., & Ulrich Hommel. (2014). *The Institutional Development of Business Schools*. Oxford University Press.

Ankrah, S., & Omar, A. T. (2015). Universities–industry collaboration: A systematic review. *Scandinavian journal of management*, *31*(3), 387-408.

Antonietti, R. (2016). From outsourcing to productivity, passing through training: micro econometric evidence from Italy. *Industry and Innovation*, *23*(5), 407–425. https://doi.org/10.1080/13662716.2016.1139444

Babina, T., He, A. X., Howell, S., Perlman, E., & Staudt, J. (2020). Does Funding Source Matter for University R&D? The Effect of Government vs. Industry Grants. *SSRN Electronic Journal*, *29*(30). https://doi.org/10.2139/ssrn.3560195

Badwan, J. J., Al Shobaki, M. J., Naser, S. S. A., & Amuna, Y. M. A. (2017). Adopting technology for customer relationship management in higher educational institutions. *International Journal of Engineering and Information Systems (IJEAIS)*, *1*(1), 20-28.

Bandawe, C. R. (2005). Psychology Brewed in an African Pot: Indigenous Philosophies and the Quest for Relevance. *Higher Education Policy*, *18*(3), 289–300. https://doi.org/10.1057/palgrave.hep.8300091

Bangi, Y. (2020). Towards Semi-Industrialized Economy in Tanzania: The Higher Learning Institutions-Industry Linkage. *Open Access Library Journal*, *7*(12), 1-15.

Barnett, R. (2016). Constructing the university: Towards a social philosophy of higher education. *Educational Philosophy and Theory*, *49*(1), 78–88. https://doi.org/10.1080/00131857.2016.1183472

Barnett, R. (2018). The University after postmodernism: An ecological approach. *Educational Philosophy and Theory*, *50*(14), 1537–1538. https://doi.org/10.1080/00131857.2018.1462529

Basias, N., & Pollalis, Y. (2018). Quantitative and Qualitative Research in Business & Technology: Justifying a Suitable Research Methodology. *Review of Integrative Business and Economics Research*, *7*(1).

Bradley, V. M. (2021). Learning Management System (LMS) used with online instruction. *International Journal of Technology in Education*, *4*(1), 68-92.

Brauer, M., & Curtin, J. J. (2018). Linear mixed-effects models and the analysis of nonindependent data: A unified framework to analyze categorical and continuous independent variables that vary within subjects and/or within items. *Psychological Methods*, *23*(3), 389–411. https://doi.org/10.1037/met0000159

Braunerhjelm, P., Ding, D., & Thulin, P. (2020). Labor market mobility, knowledge diffusion, and innovation. *European Economic Review*, *123*(46), 103386. https://doi.org/10.1016/j.euroecorev.2020.103386

Bright, A. A., & Asare, G. (2019). The impact of management information system on University of Education Winneba, Kumasi Campus-Ghana. *European Journal of Research and Reflection in Management Sciences Vol*, *7*(1), 1-20.

Brown, P., Lauder, H., & Ashton, D. (2010). The Global Auction. *Work and the Future*, *3*(4). https://doi.org/10.1093/acprof:oso/9780199731688.001.0001

Buchanan, S. (2020). Corralling Organizational Institutionalism. *Journal of Management Inquiry*, *29*(3), 251–253. https://doi.org/10.1177/1056492619899329

Calvert, M., & Muchira-Tirima, K. (2020). Making sense of professionalism and being a professional in a Kenyan higher education context. *Journal of Education for Teaching*, *39*(4), 370–382. https://doi.org/10.1080/02607476.2013.802159

Chan, M. C. E., & Clarke, D. (2019). Multi-theoretic research involving classroom video analysis: A focus on the unit of analysis. *Learning, Culture, and Social Interaction*, *46*(21), 100344. https://doi.org/10.1016/j.lcsi.2019.100344

Chatterton, P., & Goddard, J. (2000). The Response of Higher Education Institutions to Regional Needs. *European Journal of Education*, *35*(4), 475–496. https://doi.org/10.1111/1467-3435.00041

Chido Hermes Chihobo, Saibu Tambula, & Downmore Musademba. (2022). Evaluation of E-Learning in Engineering Education in Higher and Tertiary Education Institutions in Zimbabwe. *2022 IEEE IFEES World Engineering Education Forum - Global Engineering Deans Council (WEEF-GEDC)*, *5*(3). https://doi.org/10.1109/weef-gedc54384.2022.9996200

Cho, J., & Lee, J.-O. (2020). The IMS/SDP Structure and Implementation of Presence Service. *Lecture Notes in Computer Science*, *19*(4), 560–564. https://doi.org/10.1007/978-3-540-88623-5_76

Chumba, J. (2020). Beyond Enterprise: The Effect of Linkages and Partnerships Resource Mobilisation Structure on the Financial Sustainability of Universities in Kenya. *Journal of Economics and Sustainable Development*, *65*(16). https://doi.org/10.7176/jesd/11-20-15

Commission of University Education. (2023, January 1). *Commission for University Education - Home*. Www.cue.or.ke. https://www.cue.or.ke/

Cook, B. G., & Cook, L. (2016). Research Designs and Special Education Research: Different Designs Address Different Questions. *Learning Disabilities Research & Practice*, *31*(4), 190–198. https://doi.org/10.1111/ldrp.12110

Couper, M. P. (2013). Is the Sky Falling? New Technology, Changing Media, and the Future of Surveys. *Survey Research Methods*, *7*(3), 145–156. https://doi.org/10.18148/srm/2013.v7i3.5751

Creswell, J., Shope, R., Clark, V., & Green, D. (2006). SCHOOLS. *Research in Schools*, *13*(1).

Cuervo-Cazurra, A., Mudambi, R., Pedersen, T., & Piscitello, L. (2018). Research Methodology in Global Strategy Research. *Global Strategy Journal*, *7*(3), 233–240. https://doi.org/10.1002/gsj.1164

Cyiza , N. I. ., & Hakizimana, . K. J. de D. (2022). Influence of Organizational Structure on Performance of Teacher Training Project in Good Neighbors International Rwanda. *Journal of Education*, *5*(4), 66–82. https://doi.org/10.53819/81018102t3056

Dacin, M. T., Goodstein, J., & Scott, W. R. (2002). Institutional Theory and Institutional Change: Introduction to the Special Research Forum. *The Academy of Management Journal*, *45*(1), 43. https://doi.org/10.2307/3069284

Danai Thienphut, Suriya Jiamprachanarakorn, jirusth sirasirirusth, & Rachen Boonloisong. (2015). Strategic human capital management for a new University: a case study of Suan Dusit Rajabhat University. *Journal of Knowledge Management*, *19*(1), 108–120. https://doi.org/10.1108/jkm-10-2014-0432

Danko, T. (2022). Conceptual Foundations for the Development of International Business Theory in the Context of Increasing Global Technological Dynamism. *The Problems of Economy*, *4*(54), 210–213. https://doi.org/10.32983/2222-0712-2022-4-201-213

de Barros, F. B., Goedegebuure, L., Meek, V. L., & Pettigrew, A. (2015). Institutional Governance, Leadership, and Management of Research for Innovation and Development. *The Palgrave*

International Handbook of Higher Education Policy and Governance, *112*(82), 261–280. https://doi.org/10.1007/978-1-137-45617-5_15

Demirkol, D., & Seneler, C. (2019). Evaluation of student information system (SIS) in terms of user emotion, performance, and perceived usability: A Turkish university case (an empirical study). *Procedia Computer Science*, *158*, 1033-1051.

Demirkol, D., Seneler, C., Daim, T., & Shaygan, A. (2020). Measuring emotional reactions of university students towards a Student Information System (SIS): A Turkish university case. *Technology in Society*, *63*, 101412.

Dextre-Chacón, J. C., Tejedor, S., & Romero-Rodríguez, L. M. (2020). Influence of institutional seniority and type of ownership on university quality rankings: correlational analysis of Peruvian universities. *Semantic Scholar*, *13*(4), 1007–1023. https://doi.org/10.1108/jarhe-06-2020-0188

Dimitrova, G., & Dimitrova, T. (2017). Competitiveness of the universities: measurement capabilities. *Trakia Journal of Sciences*, *15*(1), 311-316.

Doina, P., Sebastian, C., & Eduard, C. (2021). Alliances and Competitive Advantage. *International Journal of Information and Education Technology*, *112*(36), 533–534. https://doi.org/10.7763/ijiet.2012.v2.198

Doligalski, T., Zaborek, P., & Sysko–Romańczuk, S. (2015). Value proposition and firm performance: segmentation of Polish online companies. *International Journal of Business Performance Management*, *16*(2-3), 133-148.

Douglass, J. A. (2016). The New Flagship University: Changing the Paradigm from Global Ranking to National Relevancy. *The African Portal*, *44*(3), 105.

Drucker, P. F. (2006). Knowledge-worker productivity: the biggest challenge. *IEEE Engineering Management Review*, *34*(2), 29–29. https://doi.org/10.1109/emr.2006.1679053

Edward Andafu, & Enose M.W. Simatwa. (2019). A Critique of the Kenyan System of Education in View of the Freirian Concept of Education: A Philosophical Perspective. In *Educational Research* (Vol. 5, Issue 8, pp. 331–347). Taylor & Francis.

Fernandes, J. O., & Singh, B. (2021). Accreditation and ranking of higher education institutions (HEIs): review, observations, and recommendations for the Indian higher education

system. *The TQM Journal*, *ahead-of-print*(ahead-of-print). https://doi.org/10.1108/tqm-04-2021-0115

Fitria, H., Mukhtar, M., & Akbar, M. (2017). The effect of organizational structure and leadership style on teacher performance in private secondary school. *IJHCM (International Journal of Human Capital Management), 1*(02), 101-112.

Fomunyam, K. G. (2020). The Itinerant Curriculum as an Alternative Curriculum Pathway in Nigerian Higher Education. *Universal Journal of Educational Research*, *8*(12B), 8304–8312. https://doi.org/10.13189/ujer.2020.082635

Forrest, J. Y. L., Novikov, D. A., Larson, S., Wang, F., & Yang, J. (2021). Competitive advantages and values created and attained out of well-crafted customer value propositions. *Studies in Business and Economics*, *16*(2), 53-73.

Friedland, J., & Jain, T. (2020). Reframing the Purpose of Business Education: Crowding-in a Culture of Moral Self-Awareness. *Journal of Management Inquiry*, *2*(4), 105649262094079. https://doi.org/10.1177/1056492620940793

Gardiner, L., & Lacy, P. (2005). Lead, respond, partner or ignore the role of business schools on corporate responsibility. *Corporate Governance: The International Journal of Business in Society*, *5*(2), 174–185. https://doi.org/10.1108/14720700510562749

Gonzalez-Brambila, C., Jenkins, M., & Lloret, A. (2016). Challenges for scholarly business research in Latin America. *Journal of Business Research*, *69*(2), 383–387. https://doi.org/10.1016/j.jbusres.2015.06.042

Gumba, K., Uvarova, S., Belyaeva, S., & Vlasenko, V. (2021). Innovations as sustainable competitive advantages in the digital economy: substantiation and forecasting. *E3S Web of Conferences*, *244*(35), 10011. https://doi.org/10.1051/e3sconf/202124410011

Gutiérrez-Villar, B., Alcaide-Pulido, P., & Carbonero-Ruz, M. (2021). Measuring a University's Image: Is Reputation an Influential Factor? *Education Sciences*, *12*(1), 19.

Hakizimana, S., & Muathe, S. (2023). Digital Kenya: A Key Driver in Entrepreneurship Ecosystem in Higher Education. *INTERNATIONAL JOURNAL of SOCIAL SCIENCE and EDUCATION RESEARCH STUDIES*, *4*(2). https://doi.org/10.55677/ijssers/v03i1y2023-25

Hamann, R., Van Duin, L., Appels, C., Taylor, E., & Akor, E. (2006). Corporate citizenship in South African business education. *South African Journal of Business Management*, *37*(2), 45–53. https://doi.org/10.4102/sajbm.v37i2.601

Hayati, U., Mulyani, S., Sukarsa, D. E., & Winarningsih, S. (2021). Information system implementation and its Impact on university organization performance in West Java. *Utopía y praxis latinoamericana: revista internacional de filosofía iberoamericana y teoría social*, (1), 343-357.

Hazelkorn, E. (2009). Impact of Global Rankings on Higher Education Research and the Production of Knowledge. *Unesco Forum on Higher Education, Research and Knowledge*, *9*(18).

Heidi I.L. Jacobs. (2010). *Curriculum 21: Essential Education for a Changing World*.

Hensley, B., Galilee-Belfer, M., & Lee, J. J. (2020). What is the greater good? The discourse on public and private roles of higher education in the new economy. *Journal of Higher Education Policy and Management*, *35*(5), 553–567. https://doi.org/10.1080/1360080x.2013.825416

Heslop, L. A., & Nadeau, J. (2010). Branding MBA programs: the use of target market desired outcomes for effective brand positioning. *Journal of Marketing for Higher Education*, *20*(1), 85–117. https://doi.org/10.1080/08841241003788110

Hoeborn, G., Conrad, R., Götzen, R., Betz, C., & Neudert, P. K. (2022). Understanding Business Ecosystems Using a Morphology of Value Systems. *Research-Technology Management*, *65*(5), 44–53. https://doi.org/10.1080/08956308.2022.2095841

Holland, K. (2009). *Is It Time to Retrain B-Schools?*

Hui, Z., He-Cheng, W., & Min-Fei, Z. (2015). Partnership Management, Supply Chain Collaboration, and Firm Innovation Performance: An Empirical Examination. *International Journal of Innovation Science*, *7*(2), 127–138. https://doi.org/10.1260/1757-2223.7.2.127

Hwang, K., & Choi, M. (2017). Effects of innovation-supportive culture and organizational citizenship behavior on e-government information system security stemming from mimetic isomorphism. *Government Information Quarterly*, *34*(2), 183–198. https://doi.org/10.1016/j.giq.2017.02.001

Ilyas, I. M., & Osiyevskyy, O. (2022). Exploring the impact of sustainable value proposition on firm performance. *European Management Journal*, *40*(5), 729-740. https://doi.org/10.1016/j.emj.2021.09.009

Inyega, J. O., Arshad-Ayaz, A., Naseem, M. A., Mahaya, E. W., & Elsayed, D. (2021). Post-Independence Basic Education in Kenya: An Historical Analysis of Curriculum Reforms. *FIRE: Forum for International Research in Education*, *7*(1), 1–23. https://doi.org/10.32865/fire202171219

Jakubik, M. (2017). Solving Business Problems Together. Case: A Master´s Degree Programme in Finland. *Journal on Systemics, Cybernetics and Informatics*, *15*(4), 53–57.

Japee, G. P. (2019). The predicament of Knowledge Society: An Inquiry. *International Journal of Interreligious and Intercultural Studies*, *2*(2), 60–67. https://doi.org/10.32795/ijiis.vol2.iss2.2019.455

Jarvis, P. (2021). The Changing University: Meeting a Need and Needing to Change. *Higher Education Quarterly*, *54*(1), 43–67. https://doi.org/10.1111/1468-2273.00144

Kamuzora, F., Lukandu, I. A., & Omwenga, V. (2015). Implementing enterprise systems for management: a case of Kenyan Universities. *Computer Technology and Adoption, 3*, 558-563.

Kaplan, A. (2014). European management and European business schools: Insights from the history of business schools. *European Management Journal*, *32*(4), 529–534. https://doi.org/10.1016/j.emj.2014.03.006

Karen Hunter Quartz, Weinstein, R. S., Kaufman, G., Levine, H. D., Mehan, H., Pollock, M., Priselac, J. Z., & Worrell, F. C. (2017). University-Partnered New School Designs: Fertile Ground for Research-Practice Partnerships. *Educational Researcher*, *46*(3), 143–146. https://doi.org/10.3102/0013189x17703947

Kaur, R. (2022). Measurement Of Performance Index Of Higher Educational Institutions by Using The Balanced Scorecard In The Northern State Of India. *Journal of Positive School Psychology*, *6*(9), 1824-1846.

Kenya Universities and Colleges Central Placement. (2023). *KUCCPS | The Placement Service*. Kuccps.net. https://students.kuccps.net/

Kerr, C. (2001). *The Uses of the University*. Harvard University Press.

Khan, M. A., & Law, L. S. (2015). An Integrative Approach to Curriculum Development in Higher Education in the USA: A Theoretical Framework. *International Education Studies*, *8*(3). https://doi.org/10.5539/ies.v8n3p66

Kimeo, J. M., & Achuora, Dr. J. (2020). Influence of Contract Administration on Performance of Parastatals in Kenya. *International Journal of Supply Chain and Logistics*, *4*(3), 70–91. https://doi.org/10.47941/ijscl.491

Kirui, J., & Sang, H. (2019). *Rethinking the Quality and Relevance of University Education in Kenya from Entrepreneurial Perspective*.

Kromydas, T. (2020). Rethinking higher education and its relationship with social inequalities: past knowledge, present state and future potential. *Palgrave Communications*, *3*(1). https://doi.org/10.1057/s41599-017-0001-8

Kumar, V., & Kumari, A. (2014). *The role of universities in local economic development: A literature review mecano-reliability-coupled nonlinear structural calculations View project*.

Kumaraswamy, M., Zou, W., & Zhang, J. (2021). Reinforcing relationships for resilience – by embedding end-user "people" in public-private partnerships. *Civil Engineering and Environmental Systems*, *32*(1-2), 119–129. https://doi.org/10.1080/10286608.2015.1022727

Lane, J. E., & D. Bruce Johnstone. (2012). *Universities and Colleges as Economic Drivers*. State University of New York Press.

Lawrence, T. B., & Shadnam, M. (2008). Institutional Theory. *The International Encyclopedia of Communication*, *6*(15). https://doi.org/10.1002/9781405186407.wbieci035

Lewin, D., & Ergas, O. (2018). Eastern Philosophies of Education: Buddhist, Hindu, Daoist, and Confucian Readings of Plato's Cave. *International Handbook of Philosophy of Education*, *10*(5), 479–497. https://doi.org/10.1007/978-3-319-72761-5_40

M'mboga Akala, D. B. (2021). Revisiting education reform in Kenya: A case of Competency Based Curriculum (CBC). *Social Sciences & Humanities Open*, *3*(1), 100107. https://doi.org/10.1016/j.ssaho.2021.100107

Ma, J., Zhang, D., Dong, J., & Tu, Y. (2020). A supply chain network economic model with time-based competition. *European Journal of Operational Research*, *280*(3), 889–908. https://doi.org/10.1016/j.ejor.2019.07.063

Madonsela, N. S. (2020). Integration of the management information system for competitive positioning. *Procedia Manufacturing*, *43*, 375-382.

MARKEY-TOWLER, B. (2018). The competition and evolution of ideas in the public sphere: a new foundation for institutional theory. *Journal of Institutional Economics*, *15*(1), 27–48. https://doi.org/10.1017/s1744137418000061

Marwa, S. M., & Zairi, M. (2009). In pursuit of performance-oriented civil service reforms (CSRs): a Kenyan perspective. *Measuring Business Excellence*, *13*(2), 34–43. https://doi.org/10.1108/13683040910961199

Mathur, P., & Nair, M. (2016). Organizational structure is a key driver to competitive advantage. *International Journal of Management and Commerce Innovations*, *3*(2), 348-356.

Mbogo, R. W. (2020). Leadership roles in managing education in crises: the case of Kenya during COVID-19 pandemic. *European Journal of Education Studies*, *7*(9). https://doi.org/10.46827/ejes.v7i9.3250

McCowan, T. (2018). Quality of higher education in Kenya: Addressing the conundrum. *International Journal of Educational Development*, *60*(2), 128–137. https://doi.org/10.1016/j.ijedudev.2017.11.002

Meissner, D., Cervantes, M., & Kratzer, J. (2018). Enhancing industry linkages potentials and limitations of government policies. *International Journal of Technology Management*, *78*(1/2), 147. https://doi.org/10.1504/ijtm.2018.093944

Milligan, L. O. (2017). Education quality and the Kenyan 8-4-4 curriculum: Secondary school learners' experiences. *Research in Comparative and International Education*, *12*(2), 198–212. https://doi.org/10.1177/1745499917711550

Momanyi, PhD, Dr. C. (2022). Technology: Examining Educational Strategies in the Wake of Covid-19 Pandemic in Kenya. *Journal of Strategic Management*, *6*(1), 59–70. https://doi.org/10.53819/81018102t5043

Mukhwana, E. J. (2017). Transforming University Education in Africa: Lessons from Kenya. *Journal of Rural and Development*, *2*(3), 341–352.

Mundia, C. N. (2017). Nairobi Metropolitan Area. *Urban Development in Asia and Africa*, *3*(1), 293–317. https://doi.org/10.1007/978-981-10-3241-7_15

Muriithi, P., Horner, D., Pemberton, L., & Wao, H. (2018). Factors influencing research collaborations in Kenyan universities. *Research Policy*, *47*(1), 88–97. https://doi.org/10.1016/j.respol.2017.10.002

Mutoka, F., Were, S., & Ombui, K. (2022). Decentralization of Training and Development Practices and Employees Performance in Constitutional Commissions in Kenya. *Journal of Human Resource &Leadership*, *6*(3), 62–74. https://doi.org/10.53819/81018102t6024

Ndegwa, J. N. (2018). Determinants of Apartment Prices within Housing Estates of Nairobi Metropolitan Area. *International Journal of Economics and Finance*, *10*(6), 104. https://doi.org/10.5539/ijef.v10n6p104

Nwankwo, C. A., Kanyangale, M. I., & Eze, S. U. (2022). Organizational Structure as a Strategic Enabler of Commercial Bank Employees in Nigeria. *Academic Journal of Interdisciplinary Studies*, *11*(3), 335. https://doi.org/10.36941/ajis-2022-0086

Ochwangi, M. J., Salome, N., & Gathara, P. M. (2022). Institutional Doctorate Supervision Practices Influencing trends in enrolment and Completion Rates in Doctorate Degree Programmes from selected Public Universities in Kenya. *International Journal of Learning and Development*, *12*(2), 1. https://doi.org/10.5296/ijld.v12i2.19922

Odhiambo, G. O. (2011). Higher education quality in Kenya: a critical reflection of key challenges. *Quality in Higher Education*, *17*(3), 299–315. https://doi.org/10.1080/13538322.2011.614472

Ogot, M., & Onyango, G. M. (2022). Does Universities' Research Output Aligned to National Development Goals Impact Economic Productivity? Evidence from Kenya. *Journal of Asian and African Studies*, *13*(7), 002190962210801. https://doi.org/10.1177/00219096221080196

Oketch, M. (2022). Higher Education Finance as a Public Good in Kenya. *Journal of Higher Education in Africa*, *20*(2), 67–87. https://doi.org/10.57054/jhea.v20i2.2726

Osterwalder, A., Pigneur, Y., Bernarda, G., & Smith, A. (2015). *Value proposition design: How to create products and services customers want*. John Wiley & Sons.

Ouajdouni, A., Chafik, K., & Boubker, O. (2021). Measuring e-learning systems success: Data from students of higher education institutions in Morocco. *Data in Brief*, *35*, 106807. https://doi.org/10.1016/j.dib.2021.106807

Paton, S., Chia, R., & Burt, G. (2020). Relevance or "relevate"? How university business schools can add value through reflexively learning from strategic partnerships with business. *Management Learning, 45*(3), 267–288. https://doi.org/10.1177/1350507613479541

Paudel, P. (2021). Online Education: Benefits, Challenges and Strategies During and After COVID-19 in Higher Education. *International Journal on Studies in Education, 3*(2), 70–85. https://doi.org/10.46328/ijonse.32

Pavlović, N. (2014). Society of knowledge and crisis. *FBIM Transactions, 2*(2), 252–257. https://doi.org/10.12709/fbim.02.02.02.25

Pidgeon, K. (2017). The keys for success: Leadership core competencies. *Journal of Trauma Nursing, 24*(6), 338–341. https://doi.org/10.1097/jtn.0000000000000322

Porter, M. E. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance.* Free Press.

Porter, M. E. (1990). *The competitive advantage of nations*. Macmillan.

Pucciarelli, F., & Kaplan, A. (2016). Competition and strategy in higher education: Managing complexity and uncertainty. *Business Horizons, 59*(3), 311–320. https://doi.org/10.1016/j.bushor.2016.01.003

Pujotomo, D., Syed Hassan, S. A. H., Ma'aram, A., & Sutopo, W. (2023). University-industry collaboration in the technology development and technology commercialization stage: a systematic literature review. *Journal of Applied Research in Higher Education*, *69*(70). https://doi.org/10.1108/jarhe-11-2022-0344

Rau, C., Zbiek, A., & Jonas, J. M. (2017). Creating Competitive Advantage from Services: A Design Thinking Case Study from the Commodities Industry Service design thinking can provide the tools to help companies design value propositions that meet customer needs and sustain competitive advantage. *Research-Technology Management, 60*(3), 48-56.

Reche, G. (1982). *A study op premature withdrawal of students from the extra-mural continuation classes*.

Rieckmann, M. (2022). Future-oriented higher education: Which key competencies should be fostered through university teaching and learning? *Futures, 44*(2), 127–135. https://doi.org/10.1016/j.futures.2011.09.005

Robert, D. F., Schurr, P. H., & Oh, S. (2017). Developing Buyer-Seller Relationships. *Journal of Marketing, 51*(2), 11–27. https://doi.org/10.2307/1251126

Rossi, P. G. (2017). The curriculum, the macro design and the micro design, and the curriculum transposition. *EDUCATION SCIENCES and SOCIETY*, *9*(2). https://doi.org/10.3280/ess2-2017oa5630

Rusu Mocănașu, D. (2020). Determining the sample size in qualitative research. *International Multidisciplinary Scientific Conference on the Dialogue between Sciences & Arts, Religion & Education*, *4*(1), 181–187. https://doi.org/10.26520/mcdsare.2020.4.181-187

Sá, C. M. (2015). The perspective of Industry's engagement with African Universities. *Draft report for the Association of African Universities*.

Schejbal, D. (2022). In Search of a New Paradigm for Higher Education. *Innovative Higher Education*, *37*(5), 373–386. https://doi.org/10.1007/s10755-012-9218-z

Schlegelmilch, B. B. (2020). Why Business Schools Need Radical Innovations: Drivers and Development Trajectories. *Journal of Marketing Education*, *42*(2), 93–107. https://doi.org/10.1177/0273475320922285

Sekaran, U., & Bougie, R. (2016). *Sekaran, U. and Bougie, R. (2016) Research Methods for Business A Skill-Building Approach. 7th Edition, Wiley & Sons, West Sussex. - References - Scientific Research Publishing*. Www.scirp.org. https://www.scirp.org/(S(351jmbntvnsjt1aadkposzje))/reference/referencespapers.aspx?referenceid=2371540

Seyfried, M., Ansmann, M., & Pohlenz, P. (2019). Institutional isomorphism, entrepreneurship, and effectiveness: the adoption and implementation of quality management in teaching and learning in Germany. *Tertiary Education and Management*, *25*(2), 115–129. https://doi.org/10.1007/s11233-019-09022-3

Shikuku, D. N., Tallam, E., Wako, I., Mualuko, A., Waweru, L., Nyaga, L., Bashir, I., & Ameh, C. (2021). Educators' perceptions of the early impact of COVID-19 on midwifery training in Kenya: a cross-sectional survey. *International Health*, *15*(61). https://doi.org/10.1093/inthealth/ihab065

Shpolianskaya, I., & Seredkina, T. (2020). Intelligent Support System for Personalized Online Learning. *Brain. Broad Research In Artificial Intelligence And Neuroscience*, *11*(3), 29–35. https://doi.org/10.18662/brain/11.3/107

Shujahat, M., Ali, B., Nawaz, F., Durst, S., & Kianto, A. (2018). Translating the impact of knowledge management into knowledge-based innovation: The neglected and mediating

role of knowledge-worker satisfaction. *Human Factors and Ergonomics in Manufacturing & Service Industries*, *28*(4), 200–212. https://doi.org/10.1002/hfm.20735

Simiyu, K. A., & Stephen, W. K. (2021). Education towards Sound Moral Values and Religious Values in Kenya: A Philosophical Perspective. *International Journal of Research and Innovation in Social Science*, *05*(05), 73–77. https://doi.org/10.47772/ijriss.2021.5504

Sionneau, B., Rabasso, C., & Rabasso, J. (2014). How European business schools can find their way. *Journal of Global Responsibility*, *5*(2), 226–257. https://doi.org/10.1108/jgr-03-2014-0013

Sjöö, K., & Hellström, T. (2019). University-industry collaboration: A literature review and synthesis. *Industry and higher education*, *33*(4), 275-285.

Smith, S. (2017). Politics, pleasure, and difference in the intimate city: Himalayan students remake the future. *Cultural Geographies*, *24*(4), 573–588. https://doi.org/10.1177/1474474017719906

Stanton, W. W., & Stanton, A. D. (2017). Traditional and Online Learning in Executive Education: How Both Will Survive and Thrive. *Decision Sciences Journal of Innovative Education*, *15*(1), 8–24. https://doi.org/10.1111/dsji.12119

Stoten, D. W. (2018). Reforming the MBA: a survey of elite British universities. *Journal of Management Development*, *37*(5), 397–408. https://doi.org/10.1108/jmd-08-2017-0264

Sung, S. Y., & Choi, J. N. (2013). Do organizations spend wisely on employees? Effects of training and development investments on learning and innovation in organizations. *Journal of Organizational Behavior*, *35*(3), 393–412. https://doi.org/10.1002/job.1897

Sziegat, H. (2021). The response of German business schools to international accreditation in global competition. *Quality Assurance in Education*, *29*(2/3), 135–150. https://doi.org/10.1108/qae-01-2020-0008

Talebzadehhosseini, S., Garibay, I., Keathley-Herring, H., Al-Rawahi, Z. R. S., Garibay, O. O., & Woodell, J. K. (2019). Strategies to enhance university economic engagement: evidence from US universities. *Studies in Higher Education*, *46*(6), 1112–1131. https://doi.org/10.1080/03075079.2019.1672645

Teressa, T. D. (2022). The Function of Industry Linkages in the Implementation of Undergraduate Field-Based Learning in Higher Learning Institutions in Ethiopia. *Creative Education*, *13*(6), 1811-1825.

The Treasury, Kenya. (2023, June 1). *The National Treasury – The National Treasury of Kenya*. Treasury. https://www.treasury.go.ke

Torquato, P. R., & Araujo, F. O. de. (2021). The Business of Business Schools. *Revista Científica Multidisciplinar Núcleo Do Conhecimento*, *6*(2), 67–80. https://doi.org/10.32749/nucleodoconhecimento.com.br/production-engineering/business-schools

Torres Zapata, I. (2019). University Research Centres: Organizational Structures and Performance. *Journal of technology management & innovation*, *14*(3), 23-43.

Tractenberg, R. E., Lindvall, J. M., Attwood, T., & Via, A. (2020). Guidelines for curriculum and course development in higher education and training. *Rigorous Journal*, *13*(2). https://doi.org/10.31235/osf.io/7qeht

Trkman, P. (2019). The value proposition of business schools: More than meets the eye. *The International Journal of Management Education*, *17*(3), 100310. https://doi.org/10.1016/j.ijme.2019.100310

Uakarn, C., Chaokromthong, K., & Sintao, N. (2021). *Sample Size Estimation using Yamane and Cochran and Krejcie and Morgan and Green Formulas and Cohen Statistical Power Analysis by G*Power and Comparisons*.

Vargo, S. L., Maglio, P. P., & Akaka, M. A. (2008). On Value and Value co-creation: a Service Systems and Service Logic Perspective. *European Management Journal*, *26*(3), 145–152. https://doi.org/10.1016/j.emj.2008.04.003

Wairimu, J., Githua, S., & Kungu, K. (2019). Role of IT Culture in Learners' Acceptance of E-Learning. *Advances in Educational Technologies and Instructional Design Book Series*, *15*(13). https://doi.org/10.4018/978-1-5225-9438-3.ch018

Wangenge-Ouma, G. (2020). Public by Day, Private by Night: examining the private lives of Kenya's public universities. *European Journal of Education*, *47*(2), 213–227. https://doi.org/10.1111/j.1465-3435.2012.01519.x

Wanzala, W. (2013). Quest for Quality and Relevant Higher Education, Training and Learning in Kenya: an Overview. *Education Journal*, *2*(2), 36. https://doi.org/10.11648/j.edu.20130202.13

Wanzenböck, I., & Frenken, K. (2020). The subsidiarity principle in innovation policy for societal challenges. *Global Transitions*, *2*(4), 51–59. https://doi.org/10.1016/j.glt.2020.02.002

Wekesa Jesse, Dr. N., & Joshua Olela, O. (2022). Education in the new era: challenges and opportunities from content-based curriculum to competence-based curriculum in Kenya. *International Journal of Scientific Research and Management*, *10*(11), 2601–2609. https://doi.org/10.18535/ijsrm/v10i11.el02

Westberg, J., & Primus, F. (2023). Rethinking the history of education: considerations for a new social history of education. *Paedagogica Historica*, *59*(1), 1–18. https://doi.org/10.1080/00309230.2022.2161321

Zamora, E. A. (2016a). Value Chain Analysis: A Brief Review. *Asian Journal of Innovation and Policy*, *5*(2), 116–128. Researchgate. https://doi.org/10.7545/ajip.2016.5.2.116

Zamora, E. A. (2016b). Value Chain Analysis: A Brief Review. *Asian Journal of Innovation and Policy*, *5*(2), 116–128. Researchgate. https://doi.org/10.7545/ajip.2016.5.2.116

Zhang, X., Jing-ming, C., & Song, J. (2021). The Order and Disorder of Higher Education System. *The Sixth International Conference on Information Management and Technology.*, *8*(4). https://doi.org/10.1145/3465631.3465983

APPENDICES

Appendix 1: Letter of Introduction

Ole Sangale Rd, Madaraka Estate
P. O. Box 59857 - 00200, Nairobi, Kenya.
Cell: +254 703 034 414/57. Twitter: @SBSKenya
Facebook/LinkedIn: Strathmore Business School

Email: info@sbs.ac.ke or visit: www.sbs.strathmore.edu

Strathmore UNIVERSITY BUSINESS SCHOOL

Thursday, 29th February 2024.

To Whom It May Concern,

RE: FACILITATION OF RESEARCH – WILLIAM KADIMA OKELLO.

This is to introduce William Kadima Okello, a Master of Business Administration student at Strathmore University Business School, admission number MBA\077576\22

As part of our MBA Program, William is expected to do applied research and undertake a project. This partially fulfills the requirements of the MBA course; to this effect, he would like to request appropriate data from your organization.

William is undertaking a research paper on "**Evaluation of how Universities are Seeking Relevance Through Industry – led Programmes in Nairobi, Kenya**." The information obtained shall be treated confidentially and used for academic purposes only.

Our MBA Program seeks to establish links with industry, and one of these ways is by directing our research to areas that would be of direct use to the industry. We would be glad to share our findings with you after the research, and we trust that you will find them of great interest and practical value to your organization.

We appreciate your support and will be willing to provide further information if required.

Yours sincerely,

Alois Njenga.
Manager – Graduate Programs

Strathmore University Business School is a Proud member of:

Association of African Business Schools AABS EFMD AACSB

Appendix 2: Ethical Clearance Certificate

Strathmore UNIVERSITY

28th February 2024

Mr Kadima William,
william.kadima@strathmore.edu

Dear Mr Kadima,

RE: Evaluation of how Universities are Seeking Relevance through Industry-Led Programmes in Nairobi, Kenya

This is to inform you that SU-ISERC has reviewed and **approved** your above SU-masters research proposal. Your application reference number is **SU-ISERC2013/24.** The approval period is from **28th February 2024 to 27th February 2025.**

This approval is subject to compliance with the following requirements:

i. Only approved documents including (informed consents, study instruments, MTA) will be used.
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC.
iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-ISERC within 72 hours of notification.
iv. Any changes anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-ISERC within 72 hours.
v. Clearance for the export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days of completion of the study to SU-ISERC.

Before commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology, and Innovation (NACOSTI) https://research-portal.nacosti.go.ke/ and obtain other clearances needed.

Yours sincerely,

Mr Ambrose Rachier,
Chairperson; SU-ISERC

STRATHMORE UNIVERSITY INSTITUTIONAL SCIENTIFIC AND ETHICAL REVIEW COMMITTEE
(SU-ISERC)
28-Feb-2024
Email:ethicsreview@strathmore.edu
P.O BOX 59857-00200
NAIROBI-KENYA

Ole Sangale Rd, Madaraka Estate. PO Box 59857-00200, Nairobi, Kenya. Tel +254 (0)703 034000
Email admissions@strathmore.edu www.strathmore.edu

Appendix 3: NACOSTI Clearance

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 170655

Date of Issue: 15/March/2024

RESEARCH LICENSE

This is to Certify that Mr.. Kadima Okello William of Strathmore University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: EVALUATION OF HOW UNIVERSITIES ARE SEEKING RELEVANCE THROUGH INDUSTRY-LED PROGRAMMES IN NAIROBI, KENYA. for the period ending : 15/March/2025.

License No: NACOSTI/P/24/33678

170655

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

See overleaf for conditions

Appendix 4: Similarity Index report

ORIGINALITY REPORT

10%	9%	4%	2%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	erepository.uonbi.ac.ke Internet Source	1%
2	Submitted to Strathmore University Student Paper	1%
3	su-plus.strathmore.edu Internet Source	1%
4	"The International Encyclopedia of Higher Education Systems and Institutions", Springer Science and Business Media LLC, 2020 Publication	1%
5	www.termpaperwarehouse.com Internet Source	<1%
6	uir.unisa.ac.za Internet Source	<1%
7	www.hrpub.org Internet Source	<1%
8	eprints.qut.edu.au Internet Source	<1%

Appendix 5: Questionnaire

My name is Kadima William, an MBA student from Strathmore Business School. I am conducting a study to evaluate how universities are seeking relevance through industry-led programs (ILPs). This study not only seeks to understand the emerging trend of ILPs among universities' value propositions but also seeks to shape the ongoing public discourse regarding the future of universities and higher education as a whole. Given your position(s) within the university, your take on the following aspects will be key and appreciated.

SECTION A: BACKGROUND INFORMATION

1. What is your gender?

☐ Male ☐ Female

2. What age range do you fall into?

☐ Under 30 years ☐ 31 – 40 years

☐ 41 – 50 years ☐ Above 50 years

3. Which of the following job categories best describes your current work or employment activities?

☐ Business development manager ☐ Strategic officer

☐ Faculty

4. Please state your experience working in your current organization.

☒ Less than 5 years ☐ 5 – 10 years

☐ 10 – 15 years ☐ More than 15 years

SECTION B: UNIVERSITY RELEVANCE

This section relates to your response regarding university relevance. Please indicate the extent to which you agree or disagree with each statement by placing an "X" on the column that best matches your response.

Note: 1=strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly agree.

	1	2	3	4	5
In my opinion, this university has a growing demand for educational programs and services.					
I believe the institution has a reasonable level of financial sustainability to meet its needs.					
I believe that the institution is relatively popular and well-recognized by all Kenyans.					
I am of the view that various stakeholders, including students, faculty, staff, and the general public, are happy with this institution.					
I would highly recommend this learning institution to others.					

SECTION C: UNIVERSITY-INDUSTRY LINKAGE

This section relates to your response regarding university-industry collaboration. Please indicate the extent to which you agree or disagree with each statement by placing an "X" on the column that best matches your response.

Note: 1=strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly agree.

	1	2	3	4	5
From my observation, meetings, workshops, trade fairs, exhibitions, conferences, etc. are held between this institution and the industry for the purpose of networking and collaboration.					
I believe there is an exchange of personnel (lecturers and industry members) between the two sectors as part of the university-industry partnership.					
I believe that training for industrial personnel, student placement, internships, and joint student supervision are provided as part of the ongoing industry-university collaboration.					
I am of the opinion that the sectors create employment opportunities for one another. For example, graduates and researchers for the industry and representations of the industry in higher education boards.					
I believe that the institution and the industry maintain proper and consistent communication via various channels, including emails, emails, conference calls, graduation invitations, etc.					

SECTION D: SYSTEMS

This section relates to your response regarding systems at the university. Please indicate the extent to which you agree or disagree with each statement by placing an "X" on the column that best matches your response.

Note: 1=strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly agree.

	1	2	3	4	5
I am under the impression that this university has a capable student information system (SIS) that manages student data, including registration, enrolment, attendance, grading, etc. effectively.					
I think that the current learning management system (LMS) is capable in administering, documenting, tracking, automating, and delivering learning.					
I submit that the present enterprise resource planning (ERP) system is designed to sufficiently integrate and manage organization-wide functions (HR, finance, procurement, etc.) efficiently.					
I believe that customer relationship management (CRM) system in place is advanced enough to enable the university to manage interactions with its stakeholders (industry experts, prospective students, alumni, donors, etc.) more effectively.					

SECTION E: STRUCTURES

This section relates to your response regarding the structures of the university. Please indicate the extent to which you agree or disagree with each statement by placing an "X" on the column that best matches your response.

Note: 1=strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly agree.

	1	2	3	4	5
Having interacted with the structure of the university, I can confirm that there is a clear line of authority.					
It is my opinion that the structures of the university are designed to support strong and effective leadership.					
From my observation, I can ascertain that there is a proper delegation of authority at various levels of the institution.					
I believe the organization's structures are designed to enable the university to adapt to the changing educational landscape.					
I strongly believe that the structures were founded and operate on a sense of shared values and principles.					

SECTION F: VALUE PROPOSITION

This section relates to your response regarding the university's changing value proposition. Please indicate the extent to which you agree or disagree with each statement by placing an "X" on the column that best matches your response.

Note: 1=strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly agree.

	1	2	3	4	5
I strongly believe that the value the university promises to deliver is relevant and important to the potential stakeholders, including students.					

I think that the value the institution promises to deliver fills a need and comes with several benefits.					
I believe the value the institution promises is unique and differentiated from what other universities offer.					
It is my understanding that the value proposition is more than a promise; the value can be substantiated.					

SECTION G: UNIVERSITY REPUTATION

This section relates to your response regarding the reputation of the university. Please indicate the extent to which you agree or disagree with each statement by placing an "X" on the column that best matches your response.

Note: 1=strongly disagree; 2=disagree; 3=neutral; 4=agree; 5=strongly agree.

	1	2	3	4	5
I am of the view that the quality of the educational services offered at the institution are excellent.					
In my view, enrolling or studying at the university says a lot about the class of a person.					
I am of the opinion that the mention of the university arouses positive sentiments.					
I believe that this university conveys a personality that sets it apart from other higher learning institutions in Kenya.					

- Thank You for Your Time -

VT OMNES
VNVM SINT

Appendix 3: Interview Questions

My name is Kadima William, an MBA student from Strathmore Business School. I am conducting this interview for the purpose of evaluating how universities are seeking relevance through industry-led programs (ILPs). This study not only seeks to understand the emerging trend of ILPs among universities' value propositions but also seeks to shape the ongoing public discourse regarding the future of universities and higher education as a whole. Given your position(s) within the university, your take on the following aspects will be key and appreciated.

SECTION A: GENERAL DEMOGRAPHIC INFORMATION

1. How would you describe your gender?

☐ Male ☐ Female

2. How would you describe your position in the university?

☐ Academic Director ☐ Dean

3. How long have you worked at this university?

☐ Less than 5 years ☐ 5 – 10 years

☐ 10 – 15 years ☐ More than 15 years

SECTION B: UNIVERSITY RELEVANCE

1. How many students does the university admit per year and would you say the enrollment rate is sufficient?

2. How would describe the overall level of student satisfaction at your university?

3. In your opinion, what is the status of graduate employability at your university?

SECTION C: INDUSTRY LINKAGES

1. How does the institution collaborate with the industry and how does this collaboration benefit the university?

2. How would you describe the magnitude of the link between the university and industry?

3. In your opinion, how does the university sustain its partnership with the industry?

SECTION D: SYSTEMS

1. How would you describe the status of the systems at the university?

2. How significant are these systems to the relevance of the university?

SECTION E: STRUCTURE

1. What does the organizational structure of the institution look like?

2. In your view, does the current line of reporting favor the relevance of the university?

SECTION F: VALUE PROPOSITION

1. Would you say the programs the institution offers are valuable to its target audience/students?

2. How would you describe the learning experience at the university?

3. How does the value proposition bridge the gap between academic and workforce development?

4. How much change has it taken to deliver your value proposition?

Appendix 4: Secondary Data Set Checklist

Variable	Data set to be collected	Time Period
University relevance	• Admissions • University rankings • Graduate employability	0-5 years
Industry linkages	• Number of Memorandum of Understanding (MOUs)	0-5 years
Systems	• TAT of operations	0-5 years
Structure	• Organizational structure • Leadership	0-5 years
Value proposition	• Number of courses per discipline • Mission/vision statement	0-5 years

Source: Author 2023