DURBAN UNIVERSITY OF TECHNOLOGY

ENTREPRENEURIAL FINANCIAL GOVERNANCE STRATEGIES USED BY THE TECHNICAL UNIVERSITIES IN GHANA

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ABSTRACT

The primary research objective of this study is to identify those factors considered critical that contribute to entrepreneurial financial strategies of governance in the TUs of Ghana and propose strategies for improvement that could enhance the generating of revenue by these institutions. Other sub-objectives examined the reliability of entrepreneurial financial governance strategies in technical universities in Ghana and the analysis of the entrepreneurial financial leadership governance role in the dynamic capabilities of developing TUs in Ghana. The study adopted a mixed methodology, comprising quantitative and qualitative data gathering and analysis. The 10 technical universities in Ghana made up the study population, with the target population comprising senior staff of the Centre for Business Development and Entrepreneurship, Finance departments and Directorate of Internal Audit of these institutions. The study selected 160 respondents for the quantitative study and 12 participants for the qualitative study by means of census sampling for the quantitative study and purposive sampling for the qualitative study. Whereas the quantitative study instrument comprised a questionnaire, the qualitative data instrument consisted of an interview guide, with the latter developed to enable the researcher to question participants on issues the questionnaire could not provide. SPSS enabled quantitative data processing; where analysis used descriptive analysis. Frequencies, means, and standard deviations, as well as SEM. For the qualitative data, thematic network analysis was used to generate themes after transcriptions had been completed and the data coded using NVIVO 12 software. The study revealed Pearson's Correlation coefficient = 0.693 (p = 0.03), which shows a strong and significant relationship between the financial governance and growth of the University. In addition, a significant value of 0.01 suggests the relationship between entrepreneurial leadership and growth is significant. This further suggests that when the various leaders in the TUs have the relevant entrepreneurial skills, their work ethics will propel and foster growth within the TUs community. The findings further revealed that entrepreneurial financial governance strategies of the surveyed technical universities are affected by both internal and external environmental factors, including economic factors, limit of state regulation. Inadequate budgetary allocation, and lack of financial monitoring systems, as well as lack of entrepreneurship culture and management competence. The study concluded that benchmarking and continuous improvement, collaboration and strategic alliance, along with income diversification, the role of leadership and entrepreneurship, and efficient resource allocation can be effective strategies in financial governance in technical universities in Ghana to achieve financial sustainability. The study supports national efforts to promote innovation, entrepreneurship, and economic development by focusing on entrepreneurial financial governance. The study's insights may have broader applicability beyond Ghana, serving as a benchmark for other developing nations facing comparable challenges in funding higher education.

DECLARATION

This work is entirely my own independent research, except where otherwise stated and where citation is provided. I confirm that this work has not been submitted nor accepted for any degree at any other tertiary institution. All sources consulted during the course of the research study have been fully acknowledge with detailed references provided.

Richard Ofosu Dwamena **28-05-2024**

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LIST OF ACRONYMS AND ABBREVIATIONS

ACFE	Association of Certified Fraud Examiners
AG	Auditor General
DUT	Durban University of Technology
FTT	Fraud Triangle Theory
HE	Higher Education
HR	Human Resources
IA	Internal Auditor
ICT	Information and Communication Technology
IFMIS	Integrated Financial Management Information System
IIA	Institute of Internal Auditors
IPPF	International Professional Practices Framework
IPSAS	International Public Sector Accounting Standards
IT	Information Technology
KMO	Kaiser-Meier-Olkin (Measure of sampling adequacy)
PCA	Principal Component Analysis
PPP	Public-private partnership
RBV	Resource-Based View
SEM	Structural equation model
SPSS	Statistical Package for Social Sciences
TU	Technical University
USA	United States of America

VIF	Variance Inflation factor
VUCA	Volatility, uncertainty, complexity, and ambiguity

CHAPTER ONE: GENERAL INTRODUCTION AND OVERVIEW OF THE STUDY

1.1 GENERAL INTRODUCTION

One of the most significant challenges colleges and universities face today, is to become financially viable through expanded sources of revenue. Issues encountered include mounting operating costs, in addition to relying on traditional student tuition, support from government, and philanthropy, with these institutions having to diversify income streams to supplement inadequate funding, as a result of diminishing public monies (Agrawall and Henderson 2002; Adeniji 2015). In the United States of America (USA), Alstete (2014) states the response to the public funding decline has resulted in universities raising fees for tuition; however, the market will bear only so much, with additional revenues sought by institutions to counter these reductions and supplement funds. If universities in developed countries such as the USA seek to consider entrepreneurial sources of finance, this should also be a consideration for developing countries such as Ghana.

Entrepreneurial finance is the study of value and resource allocation, applied to new ventures (Ambos *et al*. 2008; Cumming and Schmidt 2010). It deals with questions all entrepreneurs face, including: the amount of money needed and how much could be raised; at what point in time and from whom the funds should be solicited; the reasonable value of the start-up; and how to structure contracts for funding and decisions regarding exit (Aldaba 2002; Heyneman 2004; Adeniji 2015).

The funds of Technical Universities (TUs) in Ghana include that approved by the Ghana Parliament, money accrued to TUs in the performance of its functions, comprising fees paid by students duly registered by that TU, as well as fees, charges and dues in respect of services rendered by the TU, along with grants, subscriptions, donations and return on investment (Section 32(i) of the Technical Act 2016). According to the Auditor General (AG) Report of Ghana (2018), government's subventions to the TUs over the year have increased marginally, however, the total expenditure from employee compensation, the use of goods and services, and the consumption of fixed assets has increased exponentially, resulting in a budget deficit for most TUs in Ghana. The Ho TUs and the Bolgatanga TUs for instance, incurred a budget deficit of GHS2 134 485 and GHS1 135 241, which is equivalent to $441 922.36 and $235 039.54 respectively, at an exchange rate of GHS5.2/$, as at 31 December 2018 (AG 2018). An effective entrepreneurial financial governance system is, therefore, required to maximise financial efficiency and resource use, while also creating high-level transparency and accountability in the finances of the organization, as well as ensuring economic success in the long-term (Pretorius and Pretorius 2008).

It is against this background the need is identified to have a critical look at entrepreneurial financial governance strategies of the TUs in Ghana and to suggest innovative ways of improving on their internally generated funds to supplement government subventions, in order to enable the TUs to achieve their aim of providing quality education.

1.2 BACKGROUND OF THE STUDY

The TUs in Ghana are facing increasing financial constraints, due to a number of factors, including declining government funding, with the government of Ghana reducing its funding for higher education (HE) in recent years. These factors include the economic downturn, along with the need to prioritise other sectors' technical education. This is putting a strain on the finances of students and their families (Amankwah 2022), with demand for technical education increasing due to the country's growing economy and the need for skilled workers, which strains the capacity of the TUs to meet the demand (GIMPA 2023). In order to cope with these financial constraints, the TUs are increasingly adopting entrepreneurial financial governance strategies. These strategies are designed to generate new sources of revenue and to improve the financial sustainability of TUs, such as healthcare and infrastructure (Bondzi-Simpson & Agomor 2021).

The cost of education is also rising, due to factors such as inflation and the increasing demand for universities. Some entrepreneurial financial governance strategies used by the TUs in Ghana include, for instance, commercialisation of academic services, where the universities are offering training and consultancy services to the private sector and in this way, generating revenue and building relationships with industry partners (Amankwah 2022). The universities are also setting up endowment funds to generate long-term financial resources to ensure the universities have a stable source of income (GIMPA

2023). Further to this, the universities are partnering with the private sector to raise funds and provide students with work experience, leveraging private sector resources to improve the employability of graduates (Bondzi-Simpson & Agomor 2021). In addition, universities are also investing in research and development (R&D) to generate new knowledge and attract external funding. This is a way to improve the quality of education and contribute to the economic development of Ghana (GIMPA 2023).

The HE landscape has, in recent years, been undergoing a transformative shift, driven by the recognition of entrepreneurship as a potent force for economic growth, innovation, and societal advancement. This paradigm shift has led TUs in Ghana to reconsider their financial governance strategies, aiming to align them with the imperatives of fostering entrepreneurship and innovation within their academic environment. The convergence of academia and entrepreneurship is not merely a theoretical concept; it is becoming a practical necessity. TUs, renowned for their focus on practical skills and industry-relevant education, have a unique opportunity to be a pivotal part of driving economic development by nurturing the next generation of entrepreneurs and innovators. This necessitates a holistic revaluation of financial governance, one that integrates the principles of entrepreneurship into resource allocation, strategic decision-making, and overall institutional sustainability. Ghana, as with many developing nations, recognises the vital role entrepreneurship and innovation play in driving economic growth, job creation, and overall development. The government and various stakeholders have been advocating for a transition from traditional economic models to more innovative, knowledge-driven approaches. This shift places TUs in a pivotal position to contribute significantly to the nation's economic advancement, by nurturing entrepreneurial mindsets and fostering innovative solutions to real-world challenges.

Traditionally, universities were perceived as centres of knowledge dissemination and research. However, the evolving needs of the workforce have led institutions to expand their roles, with an increasing focus on producing graduates who are not only well-versed in their fields but are also equipped with the skills to create their own opportunities. This shift has prompted TUs to explore new avenues for financial sustainability, while staying true to their mission of producing industry-ready professionals.

1.3 PROBLEM STATEMENT

Funding is a major issue facing most Universities across the world in the face of increasing operational cost of running these Universities (Hallak and Poisson 2008). Universities are faced with tight budgets and the challenge of making up for the shortfall in funding. It is acknowledged the financial resources in education are an area at risk and open to numerous and tempting opportunities for financial abuse (OECD 2018). According to the World Education Forum (2000), in the public budget of most countries, education is the biggest or second biggest item (U4 2006), furthermore, the assortment of services and goods the education sector procures, in addition to the many parties involved on various governance levels, opens the sector to potential financial abuse.

For instance, the AG (2020) report, with regard to the University of Cape Coast Public Accounts of Ghana, indicated 14 projects that were fully funded from the Internal General Fund, valued at GHS 78 928 271.14 (equivalent to $13 400 385.59 at exchange rate of GHS5.89/$ as at 31 December 2020), were delayed for varying periods, ranging between two and eight years, due to lack of funds (AG 2020). Effective entrepreneurial financial governance strategies can lead to the creation of innovative startups, research collaborations with industries, and a workforce better prepared for the demands of a rapidly evolving job market. Conversely, an inability to address this problem might hinder the full realisation of the potential contribution by TUs to Ghana's economic and technological development.

This research, therefore, sought to unravel the challenges, factors, and opportunities inherent in the entrepreneurial financial governance strategies employed by TUs in Ghana. By doing so, it aims to provide actionable insights for institutions, policymakers, and stakeholders to enhance financial decision-making that fosters entrepreneurship, while Universities must consider entrepreneurial sources of finance as a viable option of broadening revenue sources (Rosen 2002; Auletta 2012). The application of “budget modelling, responsibility centre management, performance-based budgeting, and performance funding” (Alstete 2014: 77-83), as well as a balanced score card (Etzkowitz 2013), are seen as crucial tools in strategic plans for identifying and accessing new sources of revenue.

1.4 STUDY AIM AND OBJECTIVES

1.4.1 Primary Objectives

The primary research objective of this study is to identify those factors considered critical that contribute to entrepreneurial financial strategies of governance in the TUs of Ghana and propose strategies for improvement that could enhance the generating of revenue by these institutions.

1.4.2 Secondary Objectives

The secondary study objectives are:

- To identify critical factors contributing to the entrepreneurial financial governance strategies of the TUs in Ghana.
- To examine the reliability of entrepreneurial financial governance strategies on the TUs in Ghana.
- To analyse the entrepreneurial financial leadership governance role in the dynamic capabilities of developing TUs in Ghana.
- To benchmark best practices of entrepreneurial financial governance strategies with the entrepreneurial financial governance strategies of the TUs in Ghana.
- To propose future improvement strategies to enhance entrepreneurial strategies for financial governance of the TUs in Ghana.

The research questions addressed are as follows.

1. What are the critical factors contributing to the entrepreneurial financial governance strategies of the TUs in Ghana?
2. How reliable is entrepreneurial financial governance in strategies of TUs in Ghana?
3. What role does entrepreneurial financial leadership governance play in the dynamic capabilities of developing TUs in Ghana?
4. What are the best practices of entrepreneurial financial governance strategies aligned with the entrepreneurial financial governance strategies of the TUs in Ghana?
5. What improvement strategies can be used to enhance entrepreneurial financial governance strategies of the TUs in Ghana?

1.4.3 Hypotheses

The following hypotheses were formulated for the study, guided by the research objectives, as well as the theoretical and empirical reviews.

H_1: There is a positive significant relationship between financial governance practices and the growth of TUs.
H_2: There is a positive significant relationship between entrepreneurial leadership and the growth of TUs.
H_3: Entrepreneurial leadership plays a significant role in the relationship between financial governance practices and the growth of TUs.

1.5 STUDY SIGNIFICANCE

The motivation to conduct this study stems from the need to identify factors considered critical in contributing to entrepreneurial financial governance strategies of the TUs in Ghana and propose improvement strategies to enhance revenue generation of the TUs in Ghana. The study holds significance as it addresses the evolving landscape of HE, investigating how TUs integrate entrepreneurship into financial governance and contribute to the advancement of innovation and curricula. As a result of declining public monies, universities turn to income diversification to offset funding shortfalls (Agrawall and Henderson 2002; Adeniji 2015). According to the AG Report of Ghana for 2018, government financial support to the TUs over the year increased marginally, whereas the total expenditure emanating from Employees Compensation, the use Goods and Service and the Consumption of Fixed Assets have increase exponentially, resulting in most TUs in Ghana showing a budget deficit (AG 2018).

Findings from the study can guide TUs in optimising resource allocation for entrepreneurship education, research, and incubation programmes, enhancing the impact of available resources. By benchmarking against international institutions, the study contributes to making TUs in Ghana globally competitive, in terms of financial governance practices and their impact on innovation. In summary, the study significance lies in the potential to shape the direction of TUs in Ghana, aligning their financial governance strategies with entrepreneurship to foster innovation, economic growth, and societal advancement.

1.6 RESEARCH DESIGN

A mixed methodology was adopted, comprising data gathering and analysis that were both quantitative and qualitative. The study made use of a mixed methodology design, comprising the gathering and analysis of quantitative and qualitative data.

Using a mixed method, the researcher aimed at presenting a comprehensive analysis of the research problem. Using a mixed study approach enabled the researcher to bring the critical factors to light affecting entrepreneurial financial governance strategies in Ghanaian TUs. The quantitative approach also enables the researcher to examine linkages amongst the research variables that can be quantified for statistical analysis (Bianchini *et al*. 2015).

1.6.1 Study and Target Populations

The study population consisted of the 10 TUs in Ghana, with the target population made up of senior staff of the 10 TU, drawn from the Centre for Business Development and Entrepreneurship, Finance departments and Directorate of Internal Audit. This population composition was used, because they are TU units knowledgeable regarding the formulation and utilisation of financial and entrepreneurial philosophies in the universities. Furthermore, they constitute the key decision-making body with regard to TU financial and entrepreneurial practices. Since the study uses a mixed methods design, the population was provided according to both the quantitative and qualitative research objectives.

1.6.2 Sampling and Sampling Technique

The study used 160 respondents for the quantitative study and 12 respondents participated in the qualitative study. For the quantitative study, the 160 respondents meet the sample adequacy minimum requirement in structural equation modelling (SEM) (Hair *et al*. 2017), with census sampling employed to select these participants. The census sampling technique allows the researcher to interact with all respondents that define the population. This technique was chosen due to the quantitative study population size. In addition, respondents for the qualitative study were drawn using a purposive sampling technique, which allows the researcher to interact with respondents who can provide the needed information

1.6.3 Data Collection Instruments

1.6.3.1 Structured Questionnaire

The data collection instrument administered to respondents in the quantitative study was a questionnaire, carefully designed and well-structured to cover relevant study themes. The design of the questionnaire was based on the objectives of the study the research sought to address. Physical and electronic distribution of research instruments was facilitated by research assistants (agents), who explained the questionnaire to them, as well as that the process is voluntary and confidential, and it would require approximately 10 minutes to complete the questionnaire.

1.6.3.2 Interview Guide

The instrument for the qualitative data was an interview guide (Appendix B), developed and attached to the study proposal, to enable the researcher to interview the participants on issues not provided for in the questionnaire. One-on-one interviews were conducted at the various offices of the participants, with approximately 20 minutes required for each respondent to complete an interview.

1.7 PILOT TESTING OF DATA COLLECTION INSTRUMENTS

The same conditions were ensured for pilot testing both the questionnaire and interview guide as for their formal administration. Important insights are uncovered through pilot studies regarding the problem under study, potentially resulting in a restatement of the problem or research question refinement (Saunders, Lewis and Thornhill 2009). The institutions where the questionnaire was pilot tested are of the same structure and qualities as TUs, namely the four main public universities in Ghana, with the sample questionnaire administered to these universities’ directors and finance deputies.

The sample size for the quantitative pilot study is 18 respondents, whereas the qualitative pilot study comprises eight respondents.

1.8 DATA ANALYSIS

The collected quantitative data were checked for exactness and comprehensiveness, then summarised and thereafter, coded for easy classification and tabulation. The Statistical Package for Social Sciences (SPSS) was used by the researcher for the quantitative data processing; and the analysis used descriptive analysis, frequencies, means, and standard deviations, as well as SEM. The result will be presented in graphs and tables. For the qualitative data, thematic network analysis will be used to generate themes from the textual data generated that address the research problem (Braun and Clark 2006), after transcriptions have been completed, with NVIVO 12 software used to code the data.

1.9 VALIDITY AND RELIABILITY

1.9.1 Quantitative Data

A data measurement instrument is deemed valid when it accomplishes measuring what is intended to be measured and be reliable when it is free from measurement errors, which improve the accuracy of the study. In order to ensure validity and reliability, items used to measure the study variables would be adapted from already validated scales. The research adopted validated scales from previous research to measure the constructs. The instrument will also be subjected to two-tier scrutiny; from expects in the field and the research supervisor, to guarantee content validity, while it will be further subjected to pilot testing to identify challenges with the scales before they are used in the study. The questionnaire will have themes of related questions. In a questionnaire, those questions used to measure the same concept would be grouped to improve the internal consistency of the scale.

To ensure data collection instrument validity, the researcher carried out content validity, where recognised experts in the area were used to provide their opinions on the validity of the tool. Furthermore, the pilot study also made certain any challenges were addressed at the outset, thus avoiding restrictions to the main study and allowing evaluation of the research method appropriateness and suitability, with questionnaire validity improved (Hussain 2016: 107).

1.9.2 Qualitative Data

The qualitative research validity and reliability represent the key aspects of the quality of research. Validity thus deals with research value appropriateness, along with the suitability of tools, techniques, and processes, comprising data collection and validation (Mohamad *et al*. 2015)

When meticulously handled, the parameters for reliability and validity assist in differentiating between research that is good or bad, assuring readers of credible and trustworthy study findings. In this research, respondent validation would be applied. This will involve testing the initial results with the participants, to see whether the results remain valid. This will prevent researcher subjectivity to influence data interpretation.

1.10 RECRUITMENT PROCESS AND ETHICAL CONSIDERATION

Participants were invited in person, as well as through electronic distribution of research instruments. Administration of the questionnaire was achieved by means of google forms and submitted through WhatsApp to participants. Administrators of these platforms were provided the link to google forms to post and encouraged completion of the forms by staff members. With respect to the interview, the researcher personally visited the participants in their offices and interviewed them after permission was granted by the various universities.

To conduct the study, ethical approval was obtained from the Durban University of Technology (DUT) Faculty Research Ethics Committee (FRC) and Institutional Research Committee (IREC). Participants were informed regarding the study and an informed consent form obtained. The letter of information covered the following aspects: the study purpose; outline of the procedures; risks or discomforts to the participants; and benefits; as well as confidentiality of participants.

A letter of Information and a consent form (accompanied by the questionnaire) confirm the ethical compliance standards set by the DUT Faculty of Management Sciences Research Ethics Committee, which reviewed the study. The study will pass under the ethical category 2 (minimal research ethics compliance required). This Ethics Committee ensured participants are fully aware of the nature of their participation and that they were equally protected (Kruger, Ndebele and Horn 2014: 08)

1.11 ANONYMITY AND CONFIDENTIALITY

Respondents were assured any information provided will be treated as confidential and used for academic purposes only, and their identity will remain anonymous. Anonymity in research ensures readers cannot identify the respondents (Babbie 2020: 71). All participants were assured of their anonymity and that the data they provided would not be used in any platform other than for research purposes. A covering letter and letter of information also detailed the terms and conditions of participation.

All confidential data will be safely stored, with hard copies secured in a locked office in a filing cabinet for five years, while electronic data will all be encrypted, password protected and saved in the cloud for five years. A cloud service with two-factor authentication and encryption will be used. The researcher will ensure all electronic records on the cloud are permanently deleted after the five years, and all hard copies will be shredded. The researcher will be the only one with access to the stored confidential and sensitive data.

1.12 STUDY LIIMITATION

The research intended to use the 10 TUs for the study however, after submitting the Gatekeeper letters to the various TUs in Ghana, only six granted the researcher the permission and authorisation to conduct the research in their various TUs.

The study scope was, therefore, limited to six TUs, thereby limiting the sample size, potentially affecting the representation of various TUs in Ghana. In addition, the findings might not fully capture the diversity of strategies and challenges across different types of TUs. While the research aims for a comprehensive understanding, findings might not be easily generalizable beyond the specific context of TUs in Ghana due to the uniqueness of each institution. Despite these limitations, this study endeavours to provide valuable insights into the entrepreneurial financial governance strategies used by TUs in Ghana, thereby contributing to the understanding of the intersection between education, finance, and entrepreneurship in the HE landscapes.

1.13 OVERVIEW OF CHAPTERS

This research study consists of six chapters.

Chapter One: Introduction and study overview

Chapter one presented a detailed introduction to the study and its background. In addition, the research aim, objectives, problem statement, hypotheses and the study significance were presented.

Chapter Two. Literature Review: background and introduction

Chapter two offers a comprehensive overview of relevant literature pertaining to those critical factors that affect financial governance strategies of TUs in Ghana. The chapter further presents a detailed theoretical framework in support of the study.

Chapter Three. Literature review: the internal/external environment affecting financial governance

A review of the literature, with the internal and external environmental factors discussed as challenges to the financial growth and sustainability of TUs, is provided in this chapter. These challenges have been critically evaluated and identified, in line with the study objectives.

Chapter Four: Research Methodology

This chapter provides and discusses the research design and methodology employed in completing the study, and justifies the methods applied to conduct this research. The research method, population, sampling, and data collection instrument are addressed, in conjunction with the study aims and objectives. The chapter also includes a discussion on the ethical underpinnings of the research.

Chapter Five: findings and interpretation

In this chapter, a full spectrum of the findings gathered is presented, interpreted and discussed in relation to the study aims and objectives. The findings are further assessed in conjunction with the secondary data and tested in relation to the generated hypotheses.

Chapter Six: Conclusions and recommendations

The concluding chapter affords a comprehensive overview of the study conclusions and an in-depth discussion on the recommendations for practise, which can be supportive and beneficial to the entrepreneurial financial governance. The recommendations are also intended to be of assistance to policy makers, institutions of higher learning and entrepreneurs in general. The final chapter further proposes benchmark strategies to ensure financial sustainability of TUs in Ghana.

CHAPTER TWO

LITERATURE REVIEW: BACKGROUND AND INTRODUCTION

2.1 INTRODUCTION

The growing increase in operational costs, along with over reliance on student tuition, government support, and philanthropy, have challenged TUs to be entrepreneurially inclined. These universities, therefore, resort to diversification of income to supplement funding shortfalls resulting from diminishing public funds (Koryakina 2018; McCaffery 2010; Shattock 2010; Teixeira & Koryakina 2013). To achieve successful entrepreneurial financial governance strategies, there should be a conscious effort to broaden revenue sources. This innovation and creativity seem to be lacking in the various TUs in Ghana today. As example, in the year 2020, the Ho and the Koforidua TUs incurred a budget deficit of GHS3 391 053.82 and GHS5 827 199.59; equivalent to $452 140.51 and $776 3959.95, respectively, in their financial performance reports (AG 2021). In the USA, however, the response to diminishing public funding by universities, is to increase tuition fees; nonetheless, the market will bear this to a limit, which has seen institutions in search of added revenue to make up for these decreases (Alstete 2014; Hearn 2003; Webb 2015). With universities in developed countries such as the USA considering entrepreneurial sources of finance, this route of financing should at least be considered by developing countries such as Ghana and specifically the TUs.

Despite the numerous challenges faced by the TUs, such as the dwindling of government support, lack of internal audit independence and government regulations, there appears to be further internal and external factors that affect financial governance strategies of TUs, including management competence and other social and political factors.

In this Chapter, therefore, a review of literature is presented regarding topics and aspects pertinent to the study, investigating those critical factors that contribute to entrepreneurial financial governance strategies of the TUs, as well as reliability of their strategies, the peculiar challenges faced in improving internally generated funds; and the role entrepreneurial leadership plays in the development of TU dynamic capabilities. The themes under consideration include a conceptual view of critical factors affecting financial governance, underlying theories, related concepts, recent empirical studies, and a conceptual model.

2.2 CONCEPTUAL VIEW OF FACTORS AFFECTING FINANCIAL GOVERNANCE OF TECHNICAL UNIVERSITIES

Financial governance refers to the way financial information is collected, managed, monitored and controlled, incorporating how financial transactions are tracked by companies, performance managed, and data controlled, as well as operations, disclosures and compliance (Setyaningsih & Gunarsih 2018; Setyahadi & Narsa 2020). Through good financial governance, agency costs can be minimised and assistance in reducing not only asymmetry but also capital costs (Djokic & Duh 2016b; Jensen & Meckling 1976). Furthermore, to create good financial governance in a business necessitates introducing a set of systems in accordance with applicable standards (Crifo, Diaye, & Pekovic 2019).

To ensure sound financial governance, control must be deliberate and consistent regarding “all incomes, expenditures, assets, and liabilities to ensure not only sustainability and profitability, but also the efficiency of the business” (Soyemi 2020: 9-16). Over the years, critical factors have been identified by several studies to, globally, impact financial governance (Andoh, Adomako, & Amankwah-Amoah 2018; Asmah, Sarpong, & Ansong 2019; Gullkvist and Jokipii 2013; Zahari *et al*. 2020).

Lack of proper financial governance can lead to financial distress (Jacoby, Jacoby & Karim 2019) and reluctance by many stakeholders, such as creditors, suppliers, investors, and customers, as well as employees, to deal with companies experiencing financial difficulties (Kazemian, Rezaei, & Hajiha 2017). The challenges faced by the TUs regarding financial governance need to be identified and appropriate suggestions are required to improve upon their financial governance.

In their 2018 “Report to the Nations” (ACFE 2018), the Association of Certified Fraud Examiners (ACFE) documented the annual loss due to fraud, at approximately five percent of the total revenue to organizations. In addition, there is a continued increase in the number of fraud cases, with more threats posed to businesses and economies, where globally recorded fraud cases, between 2016 and 2018, escalated with roughly 12 percent (ACFE 2018; PWC 2018).

Notwithstanding the occurrence of fraud being a global issue, the corruption perception index (CPI) scored by Ghana in the past decade, ranged between 40 and 50 (Transparency International 2020), with Ghana ranked 75th in 2020, of the 180 countries Transparency International examined. Increasing cases of asset misappropriation and financial statement fraud were also reported in recent times by several studies, among Ghanaian firms and Institutions of Higher Learning, such as the TUs, (Asmah, Zainol, & Samah 2019; Koomson *et al*. 2020). As the 2020 AG Report on TU accounts in Ghana revealed, financial irregularities and financial infractions, including fraud cases, increased by 60 percent in 2017, 17 percent in 2018, 73 percent in 2019 and 82 percent in 2020 (AG 2020: 3)

According to the AG Report of Ghana for 2019 on accounts of TUs, some Koforidua TU staff, for instance, embezzled an amount of GHS 620 457.32/ $ 1 348 82.23, due to lack of effective internal control systems to safeguard the financial resources of the university. These were said to be monies collected from school fees, diverted into their private account (Adomonline 2022: 15 February).

In view of the elevated incidences of fraud cases, as well as other irregular financial infringements in the TUs in Ghana, such as those cited by the AG, it appears effective internal control implementation in the TUs is challenging. Putting internal controls into practice is, therefore, crucial in ensuring effective financial governance in the TUs in Ghana, which becomes a basic framework implementation of operational activities (Anderson and Eubanks 2015: Bhatt & Bhatt 2017; Ducassy & Guyot 2017; Pillai & Al–Malkawi 2018).

Effective Internal control policies motivate firms to use innovations in introducing value, in addition to entrepreneurialism, exploration, and advancement, while also providing transparency and accountability (Abdelkarim & Zuriqi 2020; Aluchna & Kuszewski 2020; Saleh, Abu Afifa, & Alsufy 2020). There is, therefore, a need to critically examine key factors affecting entrepreneurial financial governance strategies of the TUs in Ghana. From this, innovative ways of improving financial governance systems can be suggested, to enable these universities to achieve their aim of providing quality education governance (Smith & Smith 2000; Denis 2004; Winton & Yerramilli 2008; Salamzadeh 2015).

2.3 RELEVANT THEORIES CONSIDERED FOR THE STUDY

In this section, the theoretical framework underlying the study is presented; it entails theories relevant to important variables in specific study objectives. The proposed theories include Agency Theory, Schumpeterian Innovation Theory and Resource-based View (RBV),

2.3.1 Agency Theory

Fundamental corporate governance theories founded on agency theory were developed and published in American literature of the early 1970s. These theories refer to relationships formed between company owners and its directors, as well as relationships a mandate (agent) contract embodies, where the contract is made up of a first party (the principal) engaging another party (the agent) to carry out certain services on behalf of the principal. Developed from the theory of the firm, agency theory was proposed by Alchian and Demsetz (1972), with Jensen and Meckling (1976) developing the theory further. Agency theory fundamentals are also found in work by Adam Smith (1976: 305), who stated: "You cannot expect those who manage other people's money to be as careful and caring as it would belong to them. Waste and negligence are present, always, more or less, in the management of every business." While agency theory development is only found in the 1970s, the idea to separate government control has been emphasised since the 1930s (Berle and Means 1932).

Agency theory provides a theoretical foundation to understand human organizational arrangements, including incentive compensation, auditing and many bonding arrangements. Nevertheless, there are certain decisions made by managers that are motivated by self-interest, and this diminishes the welfare of the principal. As problems regarding conflict-of-interest result in losses for both parties, there is strong motivation to minimise the agency costs that ensue from cooperation. Incentives and mechanisms for monitoring are suggested to safeguard against opportunism in the agent/principal relationship (Jensen and Meckling 1976).

Due to possible disagreement between agent and principal, agents are encouraged to contract with owners, thus minimising the incongruence of the two parties' goals. It is argued by Agency Theory that agents prefer and look for monitoring contracts, because where there are no such contracts, owners are inclined to severely protect prices. Therefore, the reason agents become involved in bonding activities, is to attempt a reduced totality of imposed costs (Jensen and Meckling 1976).

Studies by these authors highlight the difference between ownership and control can lead to potential shareholder and management conflict; in this case, between government and the principal spending officers of the TUs. Under agency theory, government expects management (the agents) to display sound leadership, where financial governance decisions are made in their interest, and of those mandated, however, most often, management goals differ from those of the government. Human nature, being what it is, sees managers more likely to maximise their own interests, rather than that of the government.

It is, however, not feasible for the agent to only adopt decisions in the interest of the principal (Padilla 2000). First highlighted by Berle and Means (1932) and Adam Smith (1976), this type of conflict of interest between owners and managers was further examined by Ross (1973), after which Meckling (1976) expanded on the matter. Davis, Schoorman and Donaldson (1997), furthermore, specifically highlighted this conflict. Agency theory produces the need to harmonise manager interests with those of shareholders, where the objective is to maximise company value; without being impacted by competing interests of managers in various decision-making situations.

The relevance and importance of Agency Theory to the study of critical factors affecting financial governance strategies of the TUs requires management to properly demonstrate, to the satisfaction of the government and other stakeholders that the power conferred has been exercised and the goals and objectives achieved as agreed, through effective and efficient use of provided resources.

2.3.2 Schumpeterian Innovation Theory

The origins of Schumpeterian innovation theory can be traced to Schumpeter’s "Business Cycles" work. Joseph Alois Schumpeter proposed the innovation theory of entrepreneurship, based on Arthur Spiethoff's "Economic Cycles." Since its beginnings in 1932, the theory has shed light on a previously neglected aspect of entrepreneurship, as well as the core motives and traits of entrepreneurs. The model depicts industry development and competitiveness as based on the ability to innovate. The Schumpeterian model has three basic characteristics: (i) it is concerned with innovation generated growth; (ii) innovations result from entrepreneurial investments driven by the prospect of monopoly rents; and (iii) old technologies are replaced by new innovations, implying growth involves "creative destruction."(as cited in Upadhyay & Rawal 2018: 26).

In his neoclassical 1942 book on political economics, "Capitalism, Socialism, and Democracy", Schumpeter proposed and created the phrase "creative destruction." He defined creative destruction in his book as a "process of industrial mutation that incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one" (as cited in Upadhyay & Rawal 2018: 26). The sum of creative destruction is innovation, which involves putting resources into developing something new and original for the market/customers. According to Schumpeter, the heart and soul of an entrepreneur is creative destruction; he does not consider management of factors/resources or organisation of resource factors to be the heart and soul of an entrepreneur.

Entrepreneurs, according to Schumpeter (as cited in Sandberg 1992), are visionary change management agents that offer new economic activity, resulting in a market transformation. An entrepreneur, according to Schumpeter, is someone who has a company concept, rather than someone who extends the initial funds or invents new items. As a result, the entrepreneur's creative activity is unaffected by the organizational or legal environment in which he or she works. The entrepreneur might also be a manager in a well-established company. Entrepreneurs are distinguished from business founders and small business owners by their focus on long-term market effect.

Entrepreneurship is not a career, and it is not a long-term state in general. Whatever the entrepreneur does – whether as a salesperson or a software developer – he or she remains an entrepreneur, as long as he or she connects a market problem with innovation. When an entrepreneur moves to a "business as usual" activity, after exploiting the business concept, entrepreneurial character is lost (Schumpeter 1980). Processes and organizational structures change in tandem with the organization's growth. The obligations of the founder are progressively taken over by organizational functions, and decision-making responsibilities are handed to workers. As a result, the company "takes on a life of its own" and is able to detach itself from its creator very early (Dobák 1999: 91-96).

Entrepreneurship, as Schumpeter stated, concerns making a difference. While moving the market ahead, the entrepreneur “defies established practice and disrupts the status quo” (Mintzberg *et al*. 1998 :125). The entrepreneur wants to “modify the tide's path rather than learn to swim with it.” To accomplish this, the entrepreneur must “swim against the current; what was once a helpful element becomes an impediment, and must be eradicated.” However, this is a creative destruction; after all, the entrepreneur creates new combinations of resources and introduces new goods and business models to drive qualitative progress. Even when the entrepreneur is not always successful, some of the successes eventually establish a sustainable business model; in such circumstances, the process culminates in long-term market development (Christensen 2003). Finally, entrepreneurship produces changes; should no changes occur, the activity is not considered entrepreneurship (Davidsson 2003).

Contemporary entrepreneurial management definitions are inclined to focus on tracking down opportunities (Brazeal 1999; Shane & Venkataraman 2000; Venkataraman 1997); all define entrepreneurial management as a "mode of management" that is proactive, opportunity-driven, and action-oriented, as expected by managers of higher learning technical institutions. In this aspect, the strategic decisions and operating management philosophies of the institutions demonstrate an entrepreneurial management style.

The entrepreneurial manager produces new value during the entrepreneurial process by finding new possibilities, acquiring the resources needed to explore those opportunities, and to manage those resources by establishing an organization (Bhave 1994; Wickham 2006). Any prospective business opportunity is seized by an entrepreneurial manager, regardless of the number and kind of resources currently under his or her control (Brazeal & Krueger 1994; Stevenson 2006).

As a result, an entrepreneurial manager is someone who acts with desire beyond what the resources under his or her authority can support, in the tireless pursuit of a business opportunity (Stevenson 1983, 2006; Timmons 1994). In this study, the Schumpeterian innovation model is relevant in determining how entrepreneurial leadership can be mobilised to influence internally generated TU funds. In addition, the institution’s dynamic capabilities are informed by echoing innovation diffusion as a major source of competitiveness and value creation. In the phase of its significance in explaining competitiveness and growth, the Schumpeterian model of innovation's prominence in studying entrepreneurial management strategic studies cannot be overstated.

2.3.3 Resource-based View (RBV)

Management researchers and experts consider the RBV, which began with E. T. Penrose's work in 1959, to be one of the most significant in organizational sciences (Kellermans *et al.* 2016). A firm, according to Penrose, should be viewed as an administrative structure made up of a collection of resource bundles and when a company can create utilities for clients, it is a resource bundle. Wenerfelt (1984), Rumelt (1984), and Barney (1991) formalised the RBV more than 20 years later, and throughout the world, it is currently one of the best ways to examine a firm's long-term competitive advantage (Ridwan & Bakri 2017).

The RBV explores and interprets the resources of an organization, in order to establish how long-term competitive advantage is achieved. This view concentrates on the idea that the difficult-to-copy characteristics of a firm are sources that ensure superior performance and competitive advantage (Barney 1986; Hamel & Prahalad 1996). When resources are not easily transferred or acquired, and need an extended learning curve or significantly shifts the atmosphere and culture of an organization, they will presumably be uniquely distinctive to the company, decreasing the likelihood they can be copied. As stated by Conner (1991), a corporation's ability to perform differently is determined by its inputs and capacities deemed unique.The basic assumption in RBV deals with the basic question regarding why organizations differ and how they use resource deployment to gain and maintain competitive advantage. These concepts are obviously not new.

Penrose, on the other hand, pioneered the concept of viewing a company as a collection of resources in 1959, in which the variety of the productive services accessible from its resources and not their uniformity, are what determine the distinctive character of each firm. The RBV is based on the concept of heterogeneity in a firm's resources. With Wernerfelt's ground-breaking essay, the importance of the resource viewpoint as a new approach in strategic management was widely acknowledged (1984). Wernerfelt proposed analysing companies based on their resources can yield insights that differ from typical viewpoints.Barney offered a more precise and complete framework in 1991 to define the features of business resources required to achieve long-term competitive advantage. Resources can be valuable (in the sense they exploit opportunities and/or neutralise dangers in a firm's environment), are scarce among existing and future rivals, inimitable, and non-substitutable. Many authors have embraced and even broadened Barney's concept to incorporate resource longevity, non-tradability, and the idiosyncratic nature of resources (Amit & Schoemaker 1993; Mahoney & Pandian 1992; Peteraf 1993; Rumelt 1984; Dierickx & Cool 1989).

The approach RBV adopts is 'inside-out' or firm-specific to understand the reason why businesses thrive or fail in the market (Dicksen 1996). By using resources that are precious, unique, inimitable, and non-substitutable, businesses may establish and retain competitive advantages (Barney 1991; Collis & Montgomery 1995; Grant 1991; Wernerfelt 1984). An organization may, therefore, be perceived as a physical, human, and organizational resource amalgamation, according to RBV (Barney 1991; Amit and Shoemaker 1993). Moreover, the major sustainable competitive advantage source for prolonged and improved performance comprises company resources that are valuable, uncommon, imperfectly imitable, and non-substitutable.

The RBV theory has as its central proposition that, in order for a firm to achieve a state of sustained competitive advantage (SCA), it must acquire and control valuable, rare, inimitable, and non-substitutable (VRIN) resources and capabilities, plus, have the organization in place that can absorb and apply them (Barney 1991, 1994, 2002). Core competencies (Hamel & Prahalad 1994), dynamic capabilities (Helfat & Peteraf 2003; Teece, Pisano, & Shuen 1997), and the knowledge-based view (KBV) all support this claim (Grant 1996). The three categories of resources Barney (1991) identified are: physical capital resources (physical, technology, plant and equipment), human capital resources (training, experience, insights), and organizational capital resources.

Every company has a diverse set of resources and capabilities, which makes it vital to separate such diverse resources in order to have a better knowledge of them. One common method for classifying resources, is to divide them into two categories: tangible and immaterial resources. In the context of this study, financial governance practices and entrepreneurial leadership can serve as strategic institutional resources for TUs that can capitalise on these strategic resources to promote growth. Financial governance practices and entrepreneurial leadership could become drivers of growth factors among TUs.

2.4 MODEL ON CRITICAL FACTORS AFFECTING ENTREPRNEURIAL FINANCIAL GOVERNANCE STRATEGIES OF TECHNICAL UINVERSITIES IN GHANA

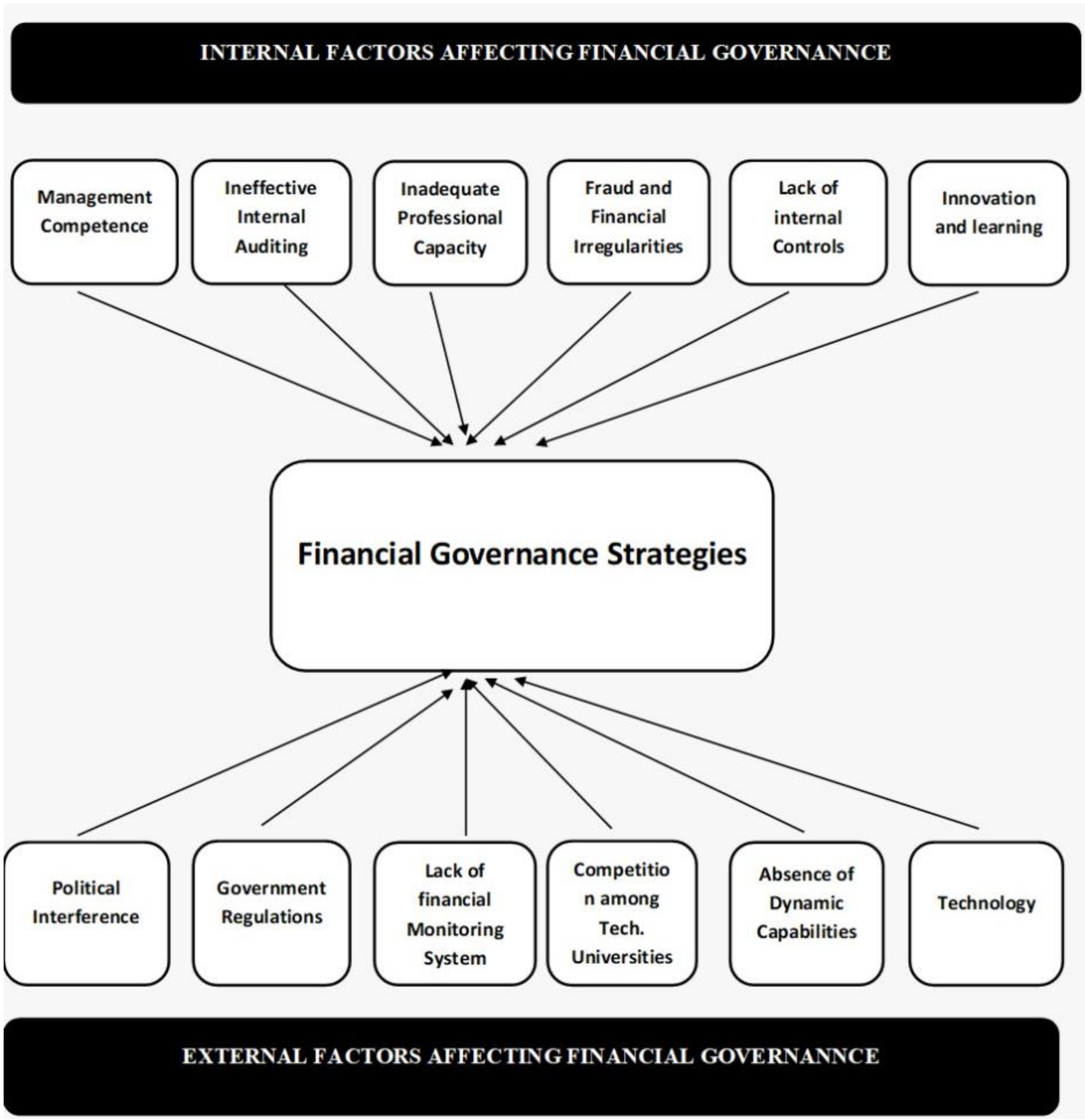

Figure 2.1: Critical Factors Affecting Financial Governance Strategies of TUs in Ghana

Source: Researcher construct (2022)

Based on the above framework (Fig. 2.1), it is clear the financial governance strategies of TUs are influenced by many elements and these consist of both internal and external factors. The fundamental factor of the TU operating environment considerably influences strategies of financial governance. According to Eruemegbe (2015: 478), the word "environment" does not necessarily infer physical surroundings, but is used to describe all those influences that bear upon the individual organisation, exerting a direct influence upon it (Akpoviroro and Owotutu 2018: 500).

Apart from considering environmental factors within TU strategic planning, these are matters TUs have little or limited control over (Kokemuller 2018). TU financial governance and strategic objectives are affected by these factors (Ibrahim and Primiana 2015: 289), along with ensuring TUs remain successful (Slitharam and Hoque 2016: 278).

Numerous factors can comprise "environmental factors", which include social, economic, cultural, and geographical aspects, in addition to factors of a technological, political, legal and ecological nature (Saleem 2010: 03; Litavnience and Znotina 2015). This means positive aspects will have to be sought to ensure effective financial governance within TUs' internal and external environment (Xuhua *et al.* 2016: 40). These environmental factors, according to Ibigun and Ogundele (2013), have to be integrated in such a way that the firm can build a strategy for competitive advantage, and sufficient earnings to improve their performance (Ibrahim and Primiana 2015: 289). It is thus important for TU leaders to adequately understand internal as well as external environmental factors in order that the institutions may thrive (Sherman 2018).

Effective financial governance can assist in decreasing agency and capital costs, in addition to any irregularities (Djokic & Duh 2016b; Jensen & Meckling 1976). It is also necessary to determine a set of processes that comply with applicable standards to establish excellent financial governance in a firm (Crifo *et al*. 2019). The external environment includes elements outside the control of the company, whereas the internal environment includes those under its control and subject to manipulation (Adebayo, Ogunyomi and Ojodu 2005).

The operational foundation of a firm contains internal variables that directly impact many business aspects (Obasan 2014). These are matters under the purview of TUs, including: events, the control environment, control activities, and human resources (HR), as well as systems, organizational material, structures, and circumstances. The critical internal factors of interest in this study include management competence, ineffective internal auditing, inadequate professionally capacitated staff, and fraud and financial irregularities, along with lack of innovation and learning, and ineffective internal control systems.

The operating environment of TUs is, however, a basic factor that considerably impacts financial governance strategies and growth. These institutions have little or no influence over environmental conditions other than to take them into account when developing their strategic plans (Kokemuller 2018). These factors are found by Ibrahim and Primiana (2015) to affect TU financial management and strategic goals, as well as their viability (Slitharam and Hoque 2016). According to Saleem (2010) and Litavnience and Znotina (2015), environmental influences might encompass social, economic, political, and cultural, as well as geographic aspects, in addition to technological, legal, and ecological aspects.

As with any other institution of higher learning, Ghana's technical institutions must constantly adapt to changing environmental conditions. To exist and have a chance to grow, TUs need innovation and effective administration. Therefore, it is essential for technical colleges to be adaptable by responding to environmental changes that may impact their organizational processes (Aly & Mansour 2017). The need for trustworthy entrepreneurial financial governance techniques thus exists at TUs. Strong leadership is acknowledged as essential to ensure businesses remain flexible financially and can cultivate resilience and continue to be sustainable in the present competitive market (Goleman 2017b). Therefore, entrepreneurial businesses should adopt financial leadership in order for their capital to be safeguarded and increased (Helfat *et al*. 2009; Goleman 2017a). In addition, it may assist an organization's financial situation and aid in wise financial decision-making that leads to success (Jackson 2013). Therefore, TUs in Ghana must build adaptable skills to leverage their expertise and carry out plans in a way that offers them a competitive edge, particularly during lean financial times.

2.5 REVIEW OF RELATED CONCEPTS

This section presents concepts/subjects relating to variables in the specific study objectives. The underlying themes include the concepts of Entrepreneurship and Entrepreneurial Leadership. The other aspects include financial governance meaning, internal factors affecting financial governance, and external factors affecting financial governance. The review also covers reliability of financial governance strategies of TUs, their internal control and internally generated fund challenges, as well as financial leadership governance and dynamic capabilities.

2.5.1 Technical Universities (TUs) in Ghana

TUs or those with a technical focus, concentrate on the study of how technology is used to enable diverse human endeavours. In this context, "technology" is defined as "the knowledge and creative processes that may aid humans to utilize tools, resources, and systems to solve issues and strengthen control over the natural and created environment in an effort to improve the human condition" (UNESCO 1985, cited in Du Pre 2010: 10). TUs do not operate in the same way as traditional/classical universities, because their focus is on applied research, as well as professional, vocational, and technical education, and as a result, on the integration of technology into many academic disciplines (Du Pre 2010; Afeti *et al*. 2013).

In Ghana, parliament passed the Technical Universities Act of 2016 to transform the first six polytechnics into TUs. The main goal of a TU, in partnership with the National Council for Tertiary Education, is to offer HE in the disciplines of engineering and science, as well as those that are technology-based, education and training that is technical and vocational, applied arts, in addition to allied subjects. TUs are also encouraged to implement course design, organisation, and delivery approaches that are competency-based and practice-oriented, as well as to forge strong relationships with business and professional associations (Government of Ghana 2016).

The Technical Institutions Act of 2016 set forth the subjects for which TUs could offer instruction and training in this regard. In order to minimise mission drift, TUs have also been subject to strict regulatory control and are not allowed to offer any programmes other than those listed above under the Act. When constructing degree programmes, TUs are required to consult the National Council for Tertiary Education. Approval is needed from both the Council and the National Accreditation Board for new courses of instruction and study programmes before they can be implemented by the Academic Boards of TUs, as stipulated in section 19(b) of the Technical Universities Act of 2016.

2.5.2 Growth of Technical Universities (TUs)

According to Delmar *et al*. (2003) and Wong *et al.* (2005), the process of business growth is heterogeneous, complex, and dynamic and considers aspects regarding economic, social, and cultural matters. Different ideas regarding how firms expand contribute to this complexity. On the one hand, researchers consider four well-defined business expansion methods: organic growth, establishment of new firms, concentration of existing firms (mergers and acquisitions), and growth through innovation and the spread of novel goods and procedures (Delmar *et al*. 2003). However, there are two ways to analyse business growth: quantitatively (how much) as well as qualitatively (how) (Coad 2009; McKelvie and Wiklund 2010).

The quantitative is typically studied by means of econometric database studies, whereas the qualitative is not as easy, and requires in-depth data on numerous aspects of a firm's activities. The four primary arguments for firm-level growth complexity are: First, the growth indices employed are not independent of actual findings. Second, business growth is related to certain unobservable elements, for instance, the management capital of a firm or the abilities of its workforce, in addition to typical observable criteria, namely location, industry, capital, size, or age. Third, innovation performance varies among businesses, and its effects on business success are time and location-dependent. Fourth, the various firm profiles, such as geography, market position, public backing, and more, impact firm growth in variable degrees. There is hardly any agreement concerning empirical factors that influence firm growth. Not only is heterogeneity at business level a factor in the difficulty of predicting factors that influence firm growth, poor growth rate persistence over time is also a factor. (Coad 2009; McKelvie and Wiklund 2010).

Researchers have found examining the firm level innovation and growth relationship, is complex. Some scholars explain this complexity by highlighting that not only does firm growth depend on internal characteristics of a firm, it also relies on characteristics external to the firm, for example, spill-overs from location and geographical knowledge (Audretsch and Lehmann 2005). Empirical papers dealing with business growth trends can be divided into three groups. Gibrat developed the Law of Proportionate Effects in 1931, which served as foundation for the first group and inspired a significant number of empirical research across a wide range of nations and industries.

According to Geroski (1999), the view of the second group is likely to perceive growth of a company as a process ascertained through endogenous (strategic) business features, rather than merely an irregular process. Identification of the variables that separate thriving firms from those that do not grow is the main goal of this body of study in the second group (Arrighetti and Ninni 2009). The third category examines how external influences affect IP and company growth, as well as how external spill-overs affect businesses' decisions to spend in R&D. The major findings show the performance and efficiency of businesses located in the cluster are positively impacted by the proximity of businesses that provide knowledge spill-overs. (Utoyo, I., Fontana, A., & Satrya, A. 2020)

2.5.3 The Entrepreneurship Concept

Entrepreneurship is a relatively new academic field still in its infancy. This makes it more difficult to define the field and determine the range of its inquiry. Furthermore, there is a no cohesive framework that differentiates between strategic management and entrepreneurship (Zahra & Dess 2009). Meaningful science, according to Bruyat and Julien (2000), begins with strong definitions and requires a minimal degree of consensus on what the field is. In defining entrepreneurship, the challenge is compounded by, among others, understanding the meaning of the term “entrepreneurship”, which is frequently personal, such as "creativity" or "love", with everyone having an opinion on the matter. Furthermore, the meaning of entrepreneurship has progressively become the same as "good". Even though the term “entrepreneur” offers some physicality, since it is used in reference to a person, it is more difficult to define entrepreneurship, as it is a construct and when it the assumption is that entrepreneurship is in effect in opposition to, or separate from management, definition can be difficult (Kao 1991: 14).

Professor R. Hizrich, an American scientist, defined entrepreneurship in 2002 as the course of action when something new is developed that has value, while the entrepreneur was defined as someone who invests the resources and time, in addition to carrying the being responsible for psychological, financial, and social risk, in return for money and the outcome desired. Entrepreneurship, as stated by Goncharova, Kartashov, and Gavrilova (2009), can be defined as an activity people engage in at their own risk in order to benefit. However, the entrepreneurial process might also be considered, with Acs (2004) who stated entrepreneurship should be viewed as the manifestation of an individual's unique qualities, manifested in a sensible combination of production elements, based on a risk-taking strategy.

The entrepreneur was described by Austrian economist Joseph Schumpeter (1934), as an economic entity whose sole purpose is to develop novel combinations. Entrepreneurs can, therefore, be regarded the key actors in a competitive environment, since their competitiveness reduces costs; this diminishes not only economic losses, but also product and service value. Through the introduction of innovative technology, it also leads to various modernisation procedures. For a long time, European society saw entrepreneurship as a second-class occupation, unworthy of high-status individuals. (Schumpeter 1934).

Entrepreneurship influences a country’s social and economic systems. In general, the execution of entrepreneurial functions has contributed to various socio-economic problem solutions, such as unemployment and low income, with the possibility of developing a middle class among economically engaged people. It also allows for new production formation, with varied functional orientations, resulting in a climate favourable to the establishment of a business and for regional or national economy investment.

Economic indicators are usually referred to as "entrepreneurial activity" when entrepreneurial activity is assessed, since it reflects the severity of the process in a specific economic zone. It is possible to use entrepreneurial activity as a different conditional indicator to examine the state of entrepreneurship in each region's particular circumstances (economic, social, institutional-legal, and so on). The term “entrepreneurial activity” refers to a dynamic process of business growth, with the overall sentiment for entrepreneurship in general, and entrepreneurs, characterised by public opinion on the founding of new businesses. This can, consequently, create an atmosphere that is socially and psychologically favourable for the establishment and growth of new businesses in the country, as well as encourage large-scale investments, infrastructure development, and business community formation. It is important to remember there are both individual and organizational level features while researching elements related to entrepreneurship. (Schumpeter 1934).

2.5.4 The concept of Entrepreneurial Leadership

Management ability to lead effectively determines the success of a firm. Entrepreneurial leadership is one successful leadership trait, explained by Alvarez and Barney (2002), as a leadership type incorporating actions meant to establish individual level business, aimed at following organizational level innovations, and actions aimed at exploiting market opportunities (Altuntas 2014). The combination of leadership potential with entrepreneurial zeal is described as entrepreneurial leadership. It transpires from the combination of finer details and the spirit of entrepreneurship with the flexible character of leadership, and has the power to change the direction of the world (Kuru 2016). This leadership style is, furthermore, explained as influencing and directing employee performance to achieve corporate goals that include the identification of entrepreneurial opportunities and their exploitation (Renko *et al*. 2015: 54-74). This is not the same as being an entrepreneur, instead, it is considered a fresh approach to leadership. On the one hand, the discipline of entrepreneurship focuses on new venture development. Entrepreneurial leaders, on the other hand, are seeking opportunities external to their new businesses (Greenberg *et al*. 2011).

Occasionally, the literature uses entrepreneurship and leadership interchangeably. Entrepreneurial leadership is then discussed. Where entrepreneurial leadership is concerned, entrepreneurial skills must also be possessed by the leader (Gunduz 2010). An entrepreneurial leader serves as an employment source, speculator, or source of knowledge (Bayrakdar 2011). Entrepreneurial leaders, according to Gunduz, may take on a wholly independent and directing function, as well as a strategy entwined with the organization's complicated system.

A leader's entrepreneur status is referred to as entrepreneurial leadership. Stated differently, entrepreneurial leadership refers to a leader who is willing to take chances, evaluate opportunities, and be inventive, productive, changeable, and strategic. Concisely, entrepreneurial leadership is a mix of management and entrepreneurship, which has a significant impact on company performance. Consequently, in the present-day business climate that is intense and dynamically competitive, company leaders, of small-scale family enterprises in particular, should have and use entrepreneurial leadership traits so their lifestyles can be maintained, they are able to compete with their rivals, and improve themselves (Karcioglu & Yucel 2004). Therefore, to ensure the success and continuation of business, administrators must be entrepreneurial leaders; this means entrepreneurship education is crucial to company management (Okudan & Rzasa 2006). Entrepreneurship should thus be included as part of the academic curriculum (Bagheri & Pihie 2010).

Leadership potential combined with entrepreneurial talents result in entrepreneurial leadership; for example, the leader is not only a team member as a soccer player, but is also the captain of the team on the field. Furthermore, other than administrators making decisions, giving orders, and monitoring employees, there is also the choice to be entrepreneurial leaders by leading the team and showing the way. This supports findings by Phaneuf *et al.* (2016), who point out the future growth of the firm relies on this kind of leadership, as entrepreneurs are known to not only take risks but also take advantage of possibilities; therefore, entrepreneurial leadership is a noteworthy phenomenon in company management.

2.5.5 The Entrepreneurial Organization

It is essential to specify the scope of an entrepreneurial organization. The definition of an entrepreneurial firm has been debated for some time (Gartner 1990; Low & MacMillan 1988; Sharma & Chrisman 1999). Briefly examined, the topic of "entrepreneurial studies" shows the diverse ways the entrepreneurial business has been conceived by scholars (Carland *et al.* 1984; Daily & Thompson 1994; d'Amboise & Muldowney 1988; Handler 1989; Kirchhoff & Kirchhoff 1987). Since it is difficult to synthesise across research with minimal agreement in the distinguishing traits of businesses, the inconsistent presentation of what makes an entrepreneurial firm, may have muddled empirical and theoretical achievements in the subject.

Sharma and Chrisman (1999: 11) attempted to "systematize the usage of language in the field of corporate entrepreneurship" to solve this issue. Despite their analysis focus being on corporate entrepreneurship, it is an important step toward uniformity in definitions throughout entrepreneurial studies. It is critical to be consistent in definitions with regard to theory creation and aggregating empirical data across studies, which is an essential step in developing a knowledge base applicable to entrepreneurial enterprises.

Defining the entrepreneurial enterprises on which the study will rely is important, with the study findings compatible with the idea of self-employment. Independent entrepreneurship is described by Sharma and Chrisman (199: 18) as, "the process through which an individual or group of individuals, working independently of any relationship with an existing organization, creates a new company." In the present study, it was decided not to develop a precise selection criterion by which "new organization" would be operationalised, for the sake of deciding whether a certain study is eligible for assessment.

Considering the diversity in how entrepreneurial businesses are described in previous research, any selection criterion arbitrarily chosen, such as age-related or any other, would only capture a fraction of the current research aimed at analysing entrepreneurial enterprises. In defining the domain of entrepreneurial company research, the researcher seeks to be broader, consequently considering any study in which samples are classified as independent entrepreneurial businesses, to be suitable for the analysis. Studies depending on empirical examinations of links between business performance and features of governance and/or strategic leadership, with the firm founded and functioning external to a previously established organization’s context, are of interest. When discrepancies are found in how different research operationalises, entrepreneurial enterprises are regarded to have substantial theoretical implications, with these also noted.

2.5.6 Financial Governance Meaning

Financial governance denotes how the collection, management, monitoring and control of financial information is achieved, which incorporates how transactions of a financial nature are tracked, performance is managed, and the control of data, compliance and disclosures, as well as operations (Setyahadi & Narsa 2020; Setyaningsih & Gunarsih 2018). Not only can agency costs be minimised through good financial governance, reduced asymmetry and capital costs can also be assisted (Djokic & Duh 2016b; Jensen & Meckling 1976); taking into account that setting systems up according to applicable standards is necessary to create good financial governance in a business (Crifo *et al*. 2019).

Soyemi (2020) asserts sound financial governance encompasses intentional and regular control, incorporating all incomes, expenses, assets, and liabilities, in order that sustainability, profitability, and business efficiency are safeguarded. Several studies have, nevertheless, emphasised the effect fraudulent activities have had on financial governance globally over the years (Andoh, Appiah-Kubi, & Effah-Asamoah 2018; Asmah *et al*. 2019; Gullkvist and Jokipii 2013; Zahari *et al*. 2020). Without appropriate financial governance, financial distress is a possible outcome (Jacoby, Krenn, & Stöckl 2019) and many stakeholders, including creditors, suppliers, investors, and customers, as well as employees, are hesitant to have dealings with companies that experience financial difficulties (Kazemian, Hashemijoo, & Tahmasebi 2017). The challenges faced by TUs regarding financial governance need to be identified and appropriate suggestions are required to improve their financial governance.

2.6 EMPIRICAL REVIEW

This section presents recent empirical studies relating to variables in the specific study objectives. The empirical studies are themed according to the following objectives: Critical Factors that Contribute to Entrepreneurial Financial Governance, and Entrepreneurial Leadership and Dynamic Capabilities.

2.6.1 Financial Governance Practices

Financial governance is the correct and most suitable exercise of power and authority in managing the financial resources of an entity. It is a component of all organizations that are successful. While considered one of the major factors that form part of sound fiscal management and resource use that is effective and efficient, the African Financial Governance Status Report (2011) states good financial governance is also seen as supporting openness and accountability. Therefore, effective financial governance structures are needed, in order to maximise efficiency of resource use, generate the highest financial and transparency responsibility level, and assure long-term economic success.

Recent investigations likewise stressed the significance efficient financial management systems have in service delivery, lessening poverty, and meeting the millennium development goals. The UK Department for Social Development (2005) submits governance is not concerned with doing, instead, what is involved, is to ensure business is taken care of, when finance and governance best practices are discussed. By implication, governance might be defined as the implementation of an effective system anticipated to ensure things are done.

This claim is supported by the financial management and project analysis guidelines offered by African Development Bank (AfDB) Group (2006) that also notes effective implementation of suitable contemporary systems of financial management signify financial management that is sound as well as good governance. Several requirements have been highlighted that must be met, according to some schools of thought, regarding NGO financial management systems, as well as that of other donor-funded projects, to comply with such financial governance standards. Shizhen (2005) highlights one such key classification that comprises cash management and compliance frameworks, internal and budgetary controls, along with cost allowance, accounting records, source documentation, and financial reporting.

In order for financial governance to be effective, the African Financial Governance Status Report (2011) highlights the use of effective systems and structures to achieve this (Wixley and Everingham 2005). The most important of these systems and structures include budget preparation and execution, internal control and accounting, along with reporting and systems, as well as auditing. Ott and Bajo (2001) claim, because public money users do not have the pertinent knowledge regarding these structures and systems, they cannot be held accountable, which leaves room for wasted spending. Similarly, several funding organizations created frameworks for evaluating financial governance that focus on the methods for the budget planning, execution, internal control, and monitoring necessary for funded projects (AfDB Group 2006). These frameworks allow organizations to determine the level of governance they practice, because of such systems that have been predefined.

2.6.2 Entrepreneurial Leadership and Dynamic Capabilities

Utoyo, Fontana, and Satrya (2020) investigated which variables are key in enhancing IP in a disruptive environment through the application of a strategic entrepreneurship framework. The management of two of Indonesia's most established enterprises in the telecommunications and banking industries were interviewed for this study. These two industries are acknowledged to be in the top five industries in the world that are most disrupted. In order to formulate an innovation strategy, entrepreneurial leadership is required. This leadership variable interacts with entrepreneurial culture in a multicollinear way (through inter-association or inter-relation); because of this, both factors are symbiotic. Utoyo *et al.* (2020) state IP is enhanced by configuring fundamental innovation skills, where investigating the opportunity and making the most of firm advantage are combined, while implementing innovation strategy. Due to core rigidities, collaborative innovation should not be employed where this configurable fundamental innovation capability is concerned.

An empirical investigation on the links between dynamic capacities and entrepreneurial performance was conducted by Ye, Zeng, and Chen (2011). The work employed three dimensions to understand dynamic capabilities for entrepreneurship, then created a SEM to statistically analyse the links between dynamic capacities and entrepreneurship performance, based on the notion of dynamic capabilities (Teece *et al.* 1997). According to the findings, leadership, as part of the dynamic capacities for entrepreneurship, was the most critical factor in achieving high performance.

Shaheen, Idris, and Ahamd (2020) investigated the influence entrepreneurial leadership has on the performance of the HE-sector in the northwestern Khyber Pakhtunkhwa province of Pakistan. Three research questions were used to guide the study, with the phenomena investigated through a research approach that is qualitative and phenomenological. Open-ended interview procedures were utilised to interview 15 respondents, identified using a purposeful sampling method (Shaheen *et al.* 2020), with data analysed using a thematic analysis technique based on mechanisms (Braun & Clarke 2014). Entrepreneurial leadership focuses on the organizational vision and goal, innovations, resilience, and creativity, as well as enthusiasm, risk taking, and potential outside institutions' existing resources, according to the findings. It was suggested training sessions in Khyber Pakhtunkhwa province be established for university leadership in order to equip them, via entrepreneurial leadership behaviours and qualities, to guide and direct the universities to achieve set goals (Shaheen *et al.* 2020).

Leitch, McMullan, and Harrison (2013) added to the body of knowledge on entrepreneurial leadership development, highlighting the increasing importance of the social and organizational domains of an individual leader in leadership research. The study considers developing a social capital theory, with regard to leadership development, within the human and social capital theory framework. Using a retrospective, interpretivist research technique, the authors report the experience of a cohort of corporate executives on an executive development programme, to expose leadership development and its “everydayness” in practice. Leitch *et al* (2013) investigate the emergence of entrepreneurial leadership as a social process and the social capital significance in this process. It is suggested, from the data that social capital creation was the only means leaders had to improve their human capital, since no apparent distinction is found between leader and leadership development, which disagrees with existing literature. The authors additionally highlight the limits to social capital theory of leadership, from the entrepreneurial small firm perspective, which ought to be increased to allow inclusion of institutional capital, otherwise, it should enhance the social capital role through formal structures and organizations, which must do more than merely enabling human capital stock of individual leaders.

Nguyen *et al.* (2021) investigated the impact entrepreneurial leadership, and orientation, as well as competence in technical innovation on the performance of SMEs. Internal elements of an organization are examined in this study, for instance, entrepreneurial orientation, team creativity, dynamic skills, and competitive advantage, to determine whether they have a mediating effect on the relationship of entrepreneurial leadership and SME performance. Acquiring valid data from 182 IT SMEs that operate in Vietnam, from Quang Trung Software City, Ho Chi Minh City, allowed analysis by means of the consistent PLS-SEM technique. Empirical findings from this study indicate possible performance improvement of IT SME entrepreneurial leadership through use of the entire range available, such as the firm’s dynamic capabilities, the creativity of its team, and competitive advantages. While an entrepreneurial approach has little bearing on a company's profitability, technical innovation capabilities can help. Furthermore, in the link between entrepreneurial leadership and SME performance, entrepreneurial orientation plays no function as a mediator (Nguyen *et al.* 2021). Finally, the findings enable us to offer actionable insights and ideas for better managing and promoting entrepreneurial inspiration.

The entrepreneurial leadership impact on the performance of an organization was studied by Rahim *et al.* (2015), who aver the environment in which businesses function has experienced an increase in the rivalry for critical resources, with the suggestion by many scholars that today's environments are not only complex but also volatile. This has emphasised the increasing ineffectiveness of more traditional approaches to strategy, which requires an entrepreneurial approach, with several of these scholars recommending entrepreneurial leadership. Since SMEs are considered the economic backbone of the nation, comprehending the way entrepreneurial leadership could impact organizational performance is critical. As a result, this study's research is focused on the link between entrepreneurial leadership and the success of an organization. Quantitative analysis was used, where 391 participants were chosen from a total of 645 136 Malaysian SME owners using a systematic random selection approach (Rahim *et al.* 2015). Entrepreneurial leadership impact s organizational performance beneficially, according to the results.

In a study of information intensive organizations, Berraies and Bchini (2018) examined the impact of transformational and transactional leadership styles on financial performance, as well as the mediating function of exploitative and exploratory innovations in this connection. To achieve this goal, a quantitative study was undertaken with 201 top executives working in knowledge-intensive companies in Tunisia, a developing country. The SEM approach was employed for data analysis, with the empirical study consequently finding a transformational leadership style is a crucial driver of exploitative and exploratory innovations, as well as the financial performance of companies (Berraies and Bchini 2018). On the one hand, two forms of innovation, in this view, partially mitigate the relationship between transformative leadership and financial performance. Transactional leadership, on the other hand, only influences exploitative innovation.

In the context of organizations' extensive knowledge, this unique study offers a more in-depth comprehension of the impact transformational and transactional leadership styles have on innovations that are exploitative and exploratory, as well as financial success. It provides managers of knowledge-intensive organizations with a reading grid to help them better lead and discover essential factors that might improve their innovation ambidexterity and performance.

2.6.3 Antecedents of Financial Governance Practices

Although agency and capital costs, as well as asymmetry can all be minimised and reduced through good financial governance (Djokic & Duh 2016b; Jensen & Meckling 1976), a set of systems must be set up in order to create good financial governance in a business, as dictated by applicable standards (Crifo *et al*. 2019). The antecedents of financial governance practices could originate from its environment. However, the operating environment of the TUs is a basic aspect that considerably influences financial governance practices. Eruemegbe (2015: 478) explains the word “environment” is not an automatic indication of the physical surrounds, rather, it refers to all the pressures that impact the individual organisation, directly influencing it (Akpoviroro and Owotutu 2018: 500).

Environmental factors offer TUs minimal, if any control, however, these factors need to still be considered within strategic planning (Kokemuller 2018). Financial governance and strategic objectives (Ibrahim and Primiana 2015: 289), as well as TUs continuing and existing successfully (Slitharam and Hoque 2016: 278) are impacted by these factors. Examples of environmental factors comprise, among others, those that are social, economic, cultural, and geographical, as well as factors pertaining to technology, politics, the law and the ecology (Saleem 2010: 03; Litavnience and Znotina 2015. The TUs will, therefore, within both their internal and external environments, have to strive for positive dynamics to develop financial governance that is effective (Xuhua *et al.* 2016: 40). Ibigun and Ogundele (2013) recommend integration of internal and external environmental factors in a way that allows the firm to build a strategy that can lead to competitive advantage and sufficient earnings to enable improved performance (Ibrahim and Primiana 2015: 289). For the organisation to thrive, TU leaders should thus adequately comprehend both internal and external environmental factors (Sherman 2018).

2.7 CONCEPTUAL FRAMEWORK

Upon completing the theoretical, conceptual and empirical reviews, a conceptual framework was drawn to illustrate the relationships to be examined between the variables of the study. The conceptual framework in Figure 2.2 displays the dependent, independent and intervening variables of the study. The dependent variable is growth of TUs, the independent variable is financial governance practices, and the intervening variable is entrepreneurial leadership. The framework highlights the direction of relation between financial governance practices, growth of TUs, and entrepreneurial leadership.

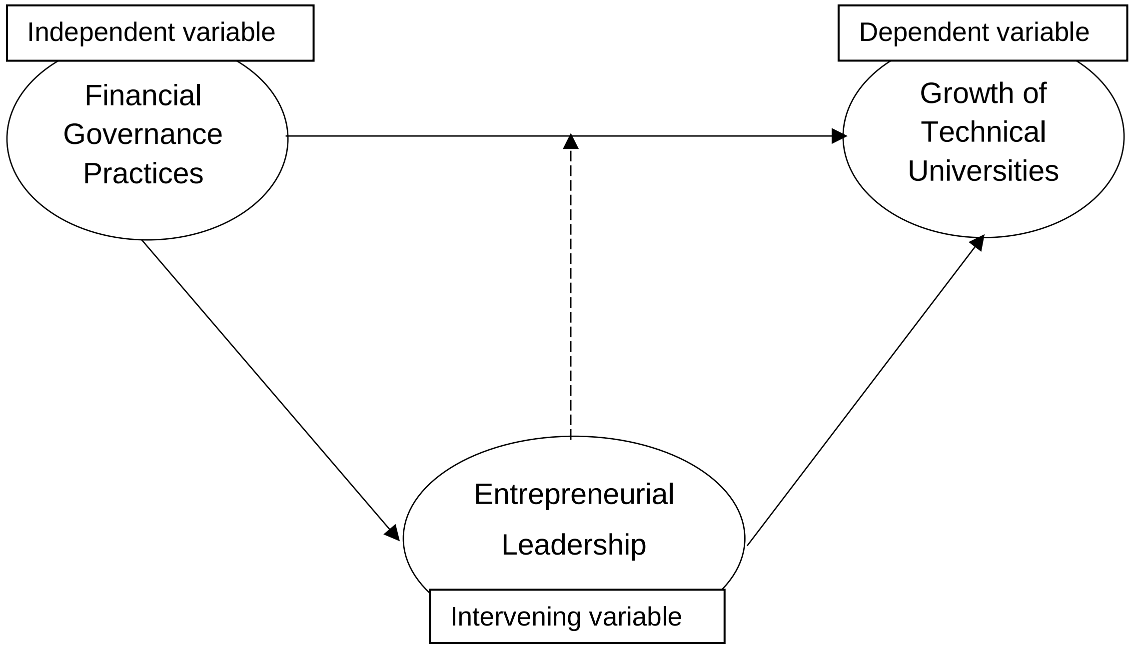

Figure 2.2: Conceptual Framework

A pictorial view of the conceptual framework (Figure 2.2) shows the research objectives within the empirical, theoretical, and conceptual arguments. Therefore, the study built the methodological approach, bearing the understanding in mind that the framework is communicating. The relationship financial governance practices have with TU growth will be investigated as will the relationship between entrepreneurial leadership and growth of TUs. The role entrepreneurial leadership plays in the relationship between financial governance practices and TU growth will also be investigated. These relationships were built on agency theory, RBV, and Schumpeter's Innovation Theory.

2.8 Chapter Summary

In this chapter a comprehensive overview was provided in respect of recent literature relevant to the critical factors affecting financial governance strategies used by the TUs in Ghana. The chapter further provided a detailed theoretical framework and a model on critical factors affecting entrepreneurial financial governance strategies used by the TUs.

The literature review delved into the critical factors that impact the financial governance strategies within technical universities in Ghana, focusing on entrepreneurial perspectives. This section of the thesis explored the relationship between principals (The government) and agents (Key officers, faculty and staff), emphasizing the challenges of aligning their interests. In the context of technical universities in Ghana, it's pertinent to examine how agency problems affect financial governance decision such as resource allocation. The Thesis was also built on theoretical framework explored by Joseph Schumpeter, this theory highlights the role of innovation in driving economic development and entrepreneurship. In the context of technical universities, it's essential to explore how innovation policies and practices influence financial governance strategies. This involve examining the allocation of funds towards research and development, as well as fostering an environment conducive to entrepreneurial activities. This section also analysed specific financial governance practices adopted by technical universities in Ghana. It includes aspects such as budgeting processes, financial reporting mechanisms, risk management strategies, and internal control systems. Evaluating these practices through the lens of agency theory and Schumpeterian innovation theory can provide insights into their effectiveness in promoting entrepreneurial initiatives while ensuring financial accountability.

Finally, the literature review explored the concept of entrepreneurship within the context of technical universities.This encompassed activities such as technology, commercialization of research outputs, incubation support for startups, and fostering a culture of innovation and risk-taking among students and faculty. Understanding how financial governance strategies impact entrepreneurial activities is crucial for enhancing the university's contribution to economic development and societal welfare. By synthesizing research findings across these dimensions, the literature review aims to provide a comprehensive understanding of the critical factors influencing entrepreneurial financial governance strategies of the technical universities in Ghana. The conceptual framework proposes that effective financial governance practices positively influence the growth of technical universities, with leadership playing a critical role in mediating this relationship. By fostering a culture of transparency, accountability, and strategic decision-making, technical university leaders can leverage financial resources to drive institutional financial governance.

The next chapter expands on the literature reviewed, to examine the internal and external environment that affect TUs in Ghana in their financial governance.

CHAPTER THREE

INTERNAL/EXTERNAL ENVIRONMENT AFFECTING FINANCIAL GOVERNANCE OF TECHNICAL UNIVERSITIES IN GHANA

3.1 INTRODUCTION

The concept of financial governance denotes how financial information is collected, managed, monitored and controlled in a company and incorporates the way financial transactions are tracked, performance managed, and data controlled, along with compliance and disclosures, as well as operations (Setyahadi & Narsa 2020; Setyaningsih & Gunarsih 2018).

Agency costs can be minimised using good financial governance, while it also helps with reducing capital costs and irregularities (Djokic & Duh 2016b; Jensen & Meckling 1976). Moreover, to create good financial governance in a business, it is necessary to establish a set of systems, in accordance with the relevant standards (Crifo *et al*. 2019). However, as a fundamental factor in financial governance, the operating environment has a considerable influence on financial governance strategies of TUs. The term "environment" does not have to connote physical surroundings (Eruemegbe 2015: 478); it can be used to describe all influences that impact the individual organisation and exert a direct influence on it (Akpoviroro and Owotutu 2018: 500). TUs have little or limited control over environmental factors, other than including these as part of strategic planning (Kokemuller 2018). Nonetheless, both their financial governance and strategic objectives are impacted by these factors (Ibrahim and Primiana 2015: 289), in addition to their continued and successful existence (Slitharam and Hoque 2016: 278).

An extensive variety of "environmental factors" ranging from social, economic, cultural, and geographical, to technological, political, legal and ecological (Saleem 2010: 03; Litavnience and Znotina 2015). TUs will thus have to pursue the positive elements, within the internal and external environment, to "enhance effective financial governance" (Xuhua *et al.* 2016: 40). There is a need for internal and external environmental factors to be integrated (Ibigun and Ogundele 2013), allowing the firm to develop a strategy to gain competitive advantage and sufficient earnings, and improved performance (Ibrahim and Primiana 2015: 289). Comprehension by TU leaders of internal and external environmental factors is needed so the business may prosper (Sherman 2018). The environmental factors affecting financial governance strategies of the TUs are therefore discussed below.

3.2 INTERNAL FACTORS AFFECTING FINANCIAL GOVERNANCE STRATEGIES

The internal environment involves factors within the control, and subject to the manipulation of the firm, while the external environment encompasses factors outside its control (Adebayo *et al.* 2005). Found within the operational base of an organization, the internal factors affect the different aspects of business directly (Obasan 2014: 165) and are made up of events, control environment, control activities, HR, and systems, as well as organizational material, structures and conditions.

3.2.1 Management Competence

Research into management competencies requires understanding and analyses regarding the needed manager capabilities, if they are to bring the objectives of the organisation to fruition. Yahya and Elsayed (2012: 123) and Veliu and Manzhari (2017: 59) define managerial competencies as “the knowledge, abilities, skills and behaviours required for effective job performance in managerial occupations.” Fatoki (2014: 143) adds management competency involves “the capabilities, skills and knowledge enabling owner/managers to innovate” and are, therefore, key to creating SCA.

Lopa and Bose (2014: 11) confirmed management competencies affect performance of the firm in the long-term, while Veliu and Manzhari (2017: 64) later determined positively significant linkages between a variety of independent managerial competencies and business performance. Therefore, financial governance is fundamentally dependent on management competence (Yahya and Elsayed 2012: 132), highlighting the importance for TU managers to understand the changes in the business environment affect the competencies required (Taipale-Erävala 2015: 20).

By implication, TU management needs to identify the competencies that will enable them to achieve business objectives. Therefore, the TUs need to be aware of the significant contribution management competencies have on business growth and success, and better comprehend how innovation and sustainable growth are impacted by their nature, role and impact (Sánchez 2011: 241).

3.2.2 Ineffective Internal Auditing

Generally, internal auditing is contained in the system of public financial management that carries out independent evaluations, which according to the Institute of internal Auditors (IIA) (2009), aims to assure achievement of institutional operations and organizational objectives. In passing the Internal Audit agency Act, (Act 658 of 2003) internal audit units were established in the public sector in Ghana. An internal audit is primarily to assess the risk management of an institution, in addition to its processes of internal control and corporate governance, therefore, ensuring their adequacy and correct functioning (Ankrah 2016). There is clear indication that the objective of setting up internal auditing units in the TUs in Ghana has not achieved value for money.

As an internal control component in organizations, internal audit is found to be a vital aspect in the attainment of objectives (Wallek 2016). However, the various stakeholder expectations on internal auditor (IA) roles and responsibilities in the prevention of fraud cases, corruption and fund embezzlement, have created an expectation gap, attributed to the lack of independence and competent staff.

3.2.2.1 Lack of Internal Audit Independence

The understanding of independence shows it to be a matter of auditor performance, action and opinion of auditors unaffected or controlled by any party (IIA 2016). IA independence is attributed to not having conditions that bind the IA department or that threaten the ability to impartially carry out the responsibilities of the IA. In achieving the required degree of independence to effectively implement IA responsibilities, it is the right of the IA to directly access the board of senior management and the board of directors in an unrestricted way (IIA 2016).

The IA department must, in addition, not be hampered in establishing the scope of work, task execution, and in reporting results (IIA 2016). Implementing internal audit units (IAUs) in the TUs in Ghana was expected to enhance organizational efficiency, lessen scandals, public fund embezzlement and corruption. However, financial irregularities in the TUs continue at an alarming rate. The 2020 AG Report on TU accounts in Ghana, revealed financial irregularities and financial infractions, including fraud cases, increased “by 60 percent in 2017, 17 percent in 2018, 73 percent in 2019 and 82 percent in 2020” (AG 2020: 3). IA independence of TUs is clearly shown to be impaired, while also unable to perform their independent responsibilities as expected.

Transparency and accountability are important for the TUs (Marfo-Yiadom & Achina 2016). Moreover, particularly in the public sector, both the scope and significance of IAs is shown to have expanded (Abbey 2010; Gros, Koch & Wallek 2016; Spira & Page 2003)

3.2.3 Inadequate Professional Capacity Staff

In measuring the quality skills of finance managers, the most important attribute is professional capacity (Prawitt, Smith, & Wood 2009, 2012), which is measured through suitable and relevant IA knowledge, skills, experience and professionalism. Influenced by training, professional competence is measured through professional association membership, being professionally certified, expertise, and trained, as well as continuing education (Arena & Azzone 2009; IIA 2016; Ismael 2013; Messier *et al.* 2011; Prawitt *et al.* 2009; Sarens, De Beelde, & Everaert 2009). The term” professional proficiency” is used, according to the international standards of professional practice of the IPPF (IIA 2016), in reference to the required knowledge, skills and other professional competencies auditors and accountants need to effectively perform their responsibilities (IIA 2016). The experience of audit and finance staff, in particular, is found to influence the quality and the role these parties play (AlTwairy, Brierley, & Gwilliam 2003; Vu 2016; Yu *et al.* 2019).

TUs in Ghana are generally underfunded the most, with regard to finance terms and human capital, in dealing with financial governance matters, which is of major concern to the effectiveness of its financial governance system. Ismael *et al*. (2021) state the proper people are one of the criteria that determine the effectiveness of a system, where they have the required skill set that fits the right position. This echoes Syed Kutnjak *et al*. (2019), who explained financial reporting skills are comprised of not only people's energies, but also their skills, talents, and knowledge, with all employed to safeguard the organization in meeting its financial responsibility to its stakeholders.

HR ability is crucial to generate financial information that is significant (Ali & Anwar 2021). A poor financial governance system is the result of insufficient quality HR, inadequate finance capacity in the area, in addition to knowledge of appropriate technology not being well-known (De Mauro *et al*. 2018). Therefore, the majority of organizations' annual reports, include the comment "our greatest assets are our employees" (Saleh *et al*. 2021: 33). While management uses business techniques in added value delivery to gain a competitive advantage (Gardi 2021), Sorguli and Al-Kake (2020) argue universities should be committed to the proper management of their human capital, so they may achieve their financial objectives and goals, thereby increasing the efficacy of their financial governance system.

3.2.4 Lack of Innovation and learning

Institution of higher learning such as the TUs, require employees who are capable to think, create, innovate and learn independently (Ortiz, Carrasco, & Cardona 2019). On the one hand, Aly and Mansour (2017) assert there is an association between innovation and learning and continuous improvement and value creation. On the other hand, Camilleri (2021) stated organizational capacity denotes sustainable professionalism and innovation development. Furthermore, due to the crucial nature of education, universities carry the responsibility to improve capabilities of lecturers and staff (Kasali 2014: 117), since the quality of lecturer's shapes achievement in performance, in accordance with the expectations of customers (Rompho 2020).

TUs enhance skills development (Kasali 2014: 118); this means, how the TUs innovate the learning process and self-development for their staff, is defined by innovation and learning. Innovation, motivation and self-development of staff, as well as professional academic activities, are used as process indicators. Furthermore, employee work behaviour deemed innovative, tends to be related to attempts at preventing service failures and recovery actions once failure happens (Zahoor and Sahaf 2017).

3.2.5 Financial irregularities

The reported fraud cases and financial irregularities in the TUs in Ghana have continually increased over the years. As revealed by the 2020 AG Report on the accounts of TUs in Ghana, financial irregularities and financial infractions, including fraud cases, escalated by 60 percent in 2017, 17 percent in 2018, 73 percent in 2019 and 82 percent in 2020 (AG 2020: 3).

An example stated by the AG Report of Ghana on accounts of TUs for 2019, was the embezzlement from Koforidua TU of GHS 620 457.32/ $ 1 348 82.23, due to internal control systems, ineffective in safeguarding the financial resources of the university (AG 2019). The funds were diverted from school fees supposedly collected, to a private account (Adomonline 2022: 15 February). The FTT has been used in the fraud literature as a basic theoretical framework (Albrecht 2014) and among those who set standards (Lokanan 2018) and academics, it is still one of the models that is the most commonly-accepted (Dellaportas 2013b; Homer 2020b), as an educational teaching tool (Daigle, Devinney, & Lee 2014), as well as studies of criminology (Mui and Mailley 2015b). Some issues covered by FTT take account problems that are financial and non-financial in nature, in addition to pressure, opportunity, and rationalisation (Vousinas 2019), with almost half the reported fraud cases alone, which statistically, occur in both governmental or public organizations (ACFE 2018).

3.2.5.1 Pressure

As indicated above, a number of researchers have determined pressure as an influencing factor in individuals committing fraud (Koomson *et al*. 2020). This concurs with Ruankaew (2016), who is of the view some kind of pressure must have been faced by every fraud perpetuator to commit fraud. It is through pressure that the perpetuator is led to engage in financial activities that are fraudulent and irregular (Said *et al*. 2017; Said *et al*. 2018). According to Brown, Furnham and Swami (2012), cheating results from pressure, because attaining the most desirable position in the world of work causes increased competition, which creates pressure to become involved in various forms of dishonesty.

Diverse studies support the above findings (Muhsin *et al*. 2018; Munirah and Nurkhin 2018; Murdiansyah *et al.* 2017; Savilia and Laily 2020; Yendrawati and Akbar 2019) and agree there is a positive and significant influence by pressure on cheating behaviour; where the more pressure received, the more likely it is that a person will commit fraud. Strong pressure will motivate individuals to commit fraud (Fadri & Khafid 2018; Kusaeri 2017) It is, therefore, critical to posit that pressure from management, superiors and other internal staff is a contributing factor affecting TU financial governance.

3.2.5.2 Opportunity

Financial irregularities and acts of fraudulence can happen unintentionally as a result of company monitoring that is weak (Nanda *et al*. 2019). Husmawati, Kurniawan and Meutia (2017) show ineffective monitoring negatively affects financial governance and can also create opportunities for the commitment of fraudulent acts by management and employees (Situngkir 2020; Triyanto 2020). Opportunities that lead to fraud and poor financial governance develop from internal controls that are weak, insufficient discipline, lack of information and audit mechanism access, as well as apathy (Situngkir 2020; Triyanto 2020). Sourced from outside parties, independent auditors are employed to increase the effectiveness of monitoring in the prevention of reporting on fraudulent financial activities (Sari *et al*. 2020). The TUs must, therefore, institute effective internal control systems to prevent revenue leakages, in order to enhance financial governance.

3.2.5.3 Rationalisation

Rahmatika (2020) explains rationalisation as seeking validation before an act of cheating is committed, where this substantiation is meant to serve as the reason to perpetrate a crime. Rationalisation is an important element in the formation of fraud, because the perpetrator seeks to find justification for fraud actions committed (Tantama *et al*. 2020; Harnovinsah, Zulaicha, & Darma 2020). The process whereby fraudulent and financial irregularities are committed by individuals is described by Nurkhin and Fachrurrozie (2018) as rationalisation. Therefore, rationalisation can be concluded to be an attempt to validate fraud, as it deems fraudulent actions and activities as normal and something done by everyone. Therefore, Supardi and Asmara (2019) state a practical response to financial distress is through financial strategy.

As cited by the AG for the year 2019 above, internal control in the TUs seems problematic, when considering the high prevalence of fraud cases and other financial irregularities. It is, therefore, crucial to implement internal controls in ensuring effective financial governance in the TUs in Ghana, which results in it becoming a basic framework for the implementation of operational activities (Anderson and Eubanks 2015; Bhatt & Bhatt 2017; Ducassy & Guyot 2017; Pillai & Al–Malkawi 2018).

3.2.6 Ineffective Internal Controls Systems

Insufficient internal controls leave firms open to risks, such as accounting transactions recorded improperly, losses and risks linked to uncertainty (Aslam & Haron 2020; Ghadamyari & Abadi 2020; Warrad & Khaddam 2020). According to several scholars

(Bhatt & Bhatt 2017; Ducassy & Guyot 2017; Pillai & Al–Malkawi 2018), firm competitiveness and financial performance are impacted by fraudulent and unauthorised transaction development and survival, which depend on control and technological innovations being carried out. The control environment is, as a result, considered a hindrance in applying good financial governance (Yurniwati & Rizaldi 2015), with these authors linking a weak financial control system to an ineffective control environment.

TUs are, therefore, required to modify their internal controls, through innovations and technologies, in improving transparency and guaranteeing stakeholder reliance (Michelberger 2016). A robust internal control system in the TUs may be very useful in ensuring their goals and objectives are met, because it enables the universities to fulfil long-term goals, while also maintaining dependable financial and managerial reporting standards (Maseko and Manyani 2011). Internal controls systems are critical to financial governance strategies of TUs in Ghana to ensure accountability is affected and there is transparency in the way the TUs go about their activities. Effective Internal control policies will inspire the TUs to introduce values by means of innovations, entrepreneurialism, investigation, and progression, while also providing openness and answerability (Abdelkarim & Zuriqi 2020; Aluchna & Kuszewski 2020; Saleh *et al*. 2020).

3.2.7 Control environment effect on financial governance

Both the internal and external rules and procedures government institutions follow in performing their daily operations are described by the term "Control environment" (Benedek, Tubak, & Beres 2014). It serves as the backdrop to the consciousness of employees and their actions, enabling effective internal control, where encouraging government and management of state institutions to establish a control environment would provide a means of fraud control and management (Nuswantara, Maulidi, & Pujiono 2017). The absence of a control environment in TUs is likely to increase opportunities for fraudulent practices. The following contexts are found in the control environment: integrity of personnel, style of management and their ideas, as well as organizational culture (Mwachiro 2013). Furthermore, to reduce the fraudulent activity level in the organization it is essential to maintain quality of the control environment (Saidu & Zabedah 2013).

Institutions of higher learning, such as TUs, have failed to recognise implementation of these procedures, hence, resulting in numerous financial irregularities. While management and employees might, on the one hand, consider these procedures to be necessary, by their redundancy or strictness affect them (Maulida & Bayunitri 2021). On the other hand, these authors assert the control environment is one hindrance to implementing good financial management, establishing a significant relationship between a weak financial control system and a control environment that is ineffective. The study specifically connects leadership with the poor control environment, as managerial and technical competence is inadequate to run institutions in the public sector. Reinforcing the TU control environment will, likewise, lessen the opportunities to commit fraud, increase observance of regulations, as well as the possibility for efficient resource use (Moreno-Enguix, Gras-Gil, & Hernandez-Fernandez 2017).

Commitment of management to financial governance systems of TU operations and close monitoring in implementing these to staff at all levels, will improve the control environment. Bayunitri and Nugraha (2020) determined fraud is significantly prevented through internal control, whereas a significant correlation was established by Njagi and Mwangi (2019), between the environment of control and financial governance; they observed building up environmental controls result in high revenue collection. Nevertheless, this contradicts Kipkemboi *et al*. (2016), who determined that the control environment was not important in forecasting financial management changes. Conditions that surround TU operational environments include regulatory, economic, industry, and operating conditions, which are subjected to continuous change. It is, therefore, necessary for the TUs in Ghana to establish the appropriate mechanisms needed to identify risks that will affect the universities in relation to these constant changes (Ayagre, Appiah-Gyamerah and Nartey 2014).

3.2.8 Lack of Risk management Procedures

The process of risk identification helps businesses better comprehend the risk type potentially experienced or they may likely be exposed to (Yakob *et al*. 2019). Risk managers must identify these sources of risk, so they may properly manage the risk (Ferreira *et al*. 2019). The risk management process, therefore, begins with the identification of risks, with the aim of this process to recognise all risks that may disrupt or harm business growth. There are a variety of strategies TU management can use, for instance, interviews, free-associating, and analysis through cause-and-effect, and flowcharts, to identify where risk factors can lead to possible changes or divergence from plans or goals. Thus, the TUs must specify suitable objectives to identify and analyse risk, while also managing significant changes likely to affect their financial governance. Risk management, according to the Society for Risk Analysis (SRA 2019: 5), is concerned with “exploring opportunities on the one hand, and avoiding losses, accidents, and disasters on the other” to achieve “the proper risk level” (Hardy *et al.* 2020: 1033)**.**

3.2.9 Lack of Financial Reporting Skills

The International Public Sector Accounting Standards (IPSAS) has become an international benchmark for evaluating Public Sector Accounting (PSA) reforms (Ben Amor and Damak Ayadi 2019; Polzer *et al.* 2021a). IPSAS are high-quality, global, accrual-based accounting standards, which “ enable governments to produce high-quality financial information that leads to better decision- making and builds accountability and trust with citizens” (IFAC 2017: 1). Reforms by IPSAS have elicited criticism in Africa with regard to further weakening prevailing accountability mechanisms, which impinges problems of financial governance, patronage politics, and corruption that has become endemic (Hopper *et al*. 2017; Lassou 2017) .

Public sector practices in accounting and financial governance are at present for international harmonisation and minimising financial reporting differences throughout countries (Aggestam-Pontoppidan & Brusca 2018; Brusca & Martínez 2016; Christiaens *et al*. 2015). This international level accounting harmonisation emergence is firmly directed by the need for financial transparency, as a foundation from which better decisions can be made (Eul-ner & Waldbauer 2018). Accordingly, ensuring accounting standards are uniform is linked to advanced financial information comparability across governments. Aligning public sector accounting to an international level is at present achieved through the application of IPSAS (Aggestam-Pontoppidan & Andernack 2016; Bergmann 2009).

3.2.10 Lack of Technical and Analytical Skills

The lack of the needed technical and analytical skills of people supposed to provide accounting or financial information in TUs has become alarming. De Silva (2015) defined technical and analytical skill as being able to separate a problem into its elemental components and acknowledge its causal relationships and consequences. These skills are more needed in some positions and most in demand in finance and accounting positions (Lim *et al*. 2016), while also part of the top skills employers prefer, as various surveys reported (Hart Research Associates 2013; Hosa-Future Health Professionals 2003).

Reporting skill can, nonetheless, only be built on a sound working knowledge of accounting, finance and information technology (IT). The much needed technical and analytical proficiency, detail-orientation, ethical mindset, and responsiveness, as well as insightfulness, intuitiveness, and inquisitiveness, along with scepticism and persistence, are lacking among financial professional of TUs in Ghana, which has contributed not only to a weak financial management system, but also a weak financial governance system.

3.2.11 Lack of Technological Skills

In today's business environment, financial reporting skills are built on technology skills. Further to this, enabling work to be done more quickly, accurately and efficiently is the aim of any rigorous financial reporting through the power of technology. Accordingly, Sutevski (2019) highlights technical skills do not only denote being able to use machines, IT, production tools and various types of business equipment. The author explains they also refer to skills critical in strategic business approach design, using diverse accounting software to manage business books, and developing different product types. Inadequate or lacking technical skills will impact TU ability to co-ordinate and manage critical business books and financial reporting.

Prospective employees with technical skills are sought by both private and public organizations to enable latest technology use, while remaining competitive. There may be a great variety of technology skills needed in a job, from word processing and transmission of emails, to video editing and programming language use. Technology skills are identified by The National Network of Business and Industry Associations (2014) as a classified workplace employability skill, interlinked with other factors, where employers are enabled to view the full spectrum of the skills required in all the main economic sectors. The inability to use technology has impeded the financial reporting skills of most public sector workers in TUs in Ghana.

3.3 EXTERNAL FACTORS AFFECTING FINANCIAL GOVERNACE IN TECHNICAL UNIVERSITIES (TUs)

According to Wahyuni, Setyadi and Hariyadi (2016: 46) and Ayandibu and Houghton (2017: 58), all events a company cannot control make up the external environment, because they take place external to the organisation; for instance, competition, training, financing and technology, and can potentially impact the operations, productivity, and innovation of a company. Innovation is stated by Fagerberg, Mowery and Nelson (2006) to heavily depend on outside resources that influence enterprise behaviour and performance (Voiculet *et al.* 2010: 02). These resources include not only financial or human assets, but also connections with other firms and institutions, public resources and foreign behaviour (Shi and Wu 2016: 04).

As explained by Yachmeneva (2014: 133), political, legal, economic, and social factors, as well as natural and climate factors indirectly affect related activities such as financial governance. Khan (2014: 89) agrees the success of business activity depends on environmental factors such as social, economic, legal, and political, along with technological aspects that influence their activities, thus leading to, or inhibiting, successful financial governance strategies. Careful and accurate external environment analysis can benefit the organisation by providing greater understanding and an appreciation of the context in which the organisation operates (Chitechi 2014: 15). External factors can, therefore, create opportunities (or threats) for TUs and this can enhance or threaten the value of financial resources and turn these into competitive dis/advantage (Pakkanen 2012: 14).

3.3.1 Pressure to meet expectation of external stakeholders

Although there is strong public demand that public institutions, such as the TUs, be accountable (Dewi, Utami, & Setyowati 2019), innovation and good management are crucial to the survival of TUs, which have substantial financial implications (Rahayu 2020: 28). Nevertheless, as financial governance is crucial to achieve of a high quality, optimising financial governance could enhance the service quality of education (Rahayu 2020: 277), where finance is interrelated with and influences the quality of education (Bastian 2007: 178).

The pressure management experiences in meeting third party expectations or that of parties external to the university, are referred to as external pressure (Manurung and Hardika 2015). A situation in which external pressure is illustrated, is when significant pressure is exerted by universities in obtaining funds in support of operations, where external users may favour this financial situation (Hung *et al.* 2019). The leverage ratio measures external pressure, through a comparison between total liabilities and total assets. This ratio aids with assessment of the ability an institution demonstrates in repayment of loans (Husmawati, Ramdhani, & Zulaicha 2017; Evana, Amelia, & Anwar 2019). Where the company's leverage ratio is higher, there is more potential for fraudulent financial reporting, because management may be tempted to commit fraud. The leverage ratio is used in research by Apriliana and Agustina (2017), Evana *et al*. (2019) and Shi *et al*. (2017) as a tool in measuring external pressure, therefore, the potential for fraudulent financial governance is positively affected by external pressure .

Situngkir and Triyanto (2020) found financial fraud negatively influenced by external forces. External pressure results from demands to fulfil expectations on institutional management by a party external to the organization. In light of the above, various authors (Cavanagh *et al*. 2016; Christiaens *et al*. 2015; OECD/IFAC 2017) emphasise the managers of finances in the TUs, particularly accountants and Directors of Finance, must strictly comply with the fundamental code of ethics, such as integrity and objectivity, to enhance financial governance levels. The TUs in Ghana face continuous demand for accountability, as with any other public sector institution. The TUs are, therefore, required to be dynamic in responding to environmental changes that may affect their organizational procedures (Aly & Mansour 2017).

Strategic planning and decision-making, measurement and evaluation of performance, as well as strategic risk management and constant improvement, are deemed essential in financial governance, in order to meet the demand for accountability (Aly & Mansour 2017). In order to produce an effective evaluation, it is necessary to translate the strategic objectives and mission of the organization into indicators and dimensions of financial and non-financial performance (Al-Dahiyat 2020). Critical questions that need to be addressed by TU managers in meeting the demand for accountability include: how students see the leadership capabilities of TU management, what the TUs must excel at to continue to improve, and how financial governance strategies may be enhanced. Demand for accountability is thus a critical factor that affects financial governance strategies of TUs in enhancing transparency and strategic resource allocation.

3.3.2 Political factor

A stable political situation increases the investment attractiveness for domestic industry, particularly for foreign investors (Yachmeneva 2014: 133). In addition, stability of the political situation also influences company choice of where and how to compete in the market (Indris and Primiana 2015). Companies, therefore, need to take cognisance of political trends, as changes in policies can affect the legal framework within which businesses operate. Ingram, Spears and Birendra (2017) asserted market conditions are impacted by any political instability; this dictate how much government assistance and support TUs can be offered (Stimpson and Smith 2015: 71**)**.

3.3.3 Social factors affecting financial governance strategies

Social factors are defined as the facts and experiences that influence an individual's personality, attitudes and lifestyle (OECD 2010). As stated by Henry (2010), factors that not only affect individuals, but also the thoughts and behaviours of business within social settings, are deemed social factors and affect market strategies firms put in place, regardless of their size (Gachuhi 2016). Luebke (2017) and Indris and Primiana (2015: 189) assert the being able to study and comprehend their social environment is often lacking in entrepreneurs; a key challenge that influences innovation and creativity. The role social factors play is, therefore, significant in innovation regarded as effective, with social factors requiring the attention of entrepreneurs, in gaining a competitive advantage (Rujirawanich, Addison and Smallman 2011: 1264). As Genis-Gruber and Öğùt (2014: 719) argued, in considering social factors, entrepreneurs are able to innovate in ways that take account of current social needs and preferences (Shalley and Gilson 2004).

3.3.4 Economic factors Affecting Financial governance

Economic factors, according to Nichter (2009a), are those factors leading to alterations in production costs, product prices, rates of wages, and interest, as well as inflation. The way profits are generated by a business, its losses, or growth, are influenced by these factors (Gachuhi 2016). Pragmatic people advance economic progress, since they are entrepreneurial, innovative, can take advantage of opportunities, and disposed to risk-taking (Hisrich 2005). It is believed financial stability has a potentially positive effect on financial governance strategies of TUs. This takes place due to poor business performance resulting in a business experiencing financial stability difficulties, compelling action by management in balance sheet manipulation (Akbar 2017; Apriliana & Agustina 2017; Irwandi, Komara, & Rasidin 2019).

Rahmatika, Hidayat and Nugraha (2019) found financial stability affects a company's financial governance. This description applies to the stable financial condition of a business, becoming a business performance assessment benchmark. Management will be faced with much pressure when the economic situation is unstable, particularly when management of assets and funds is not maximised. As explained in the Auditing Standards Statement (SAS) No. 99, when there is a financially unstable situation as a result of company operations, management will be pressurised by company economic and industrial conditions. Therefore, TUs must have exceptional financial stability to enable stakeholders to have trust in their financial governance.

3.3.5 Inadequate Budgetary allocation by government

Inadequate budgetary allocation is a political and economic decision that affects financial governance strategies of the TUs and is responsible for shortage of funds in the system, placing considerable pressure on internally generated funds (Ogunode & Abubakar 2021; Ogunode 2020). The annual budgetary allocation for the administration of TUs in Ghana is grossly inadequate, burdening the meagre internally generated revenue. According to the AG of Ghana, budgetary allocations to TUs over the years constitute approximately 44 percent, leaving the TUs to fund the budgetary gap of roughly 66 percent from internally generated revenues (AG 2017, 2018, 2019, 2020).

The annual budget for the administration of universities in the country is highlighted as inadequate to provide the needed infrastructural facilities and HR the various universities require to function properly. Dwindling budgetary allocation by various government departments to TUs is, therefore, a critical factor affecting financial governance of these universities in Ghana.

3.3.6 Government Regulation/laws

Stimpson and Smith (2015: 71) assert legal factors encompass any law influencing company activities, such as competition laws, employee protection, consumer protection regulations, and export controls. Further to this, any country's government is responsible to institute policies, procedures and legal frameworks that regulate the way businesses operate inside the borders of the particular country (Mupemhi, Duve, & Mupemhi 2013: 22). These laws govern the compliance conditions under which the TUs operate and, therefore, have serious implications for the running of the organisation and, when not adhered to, severe sanctions can be imposed. Legislative changes are thus critical factors affecting TU governance strategies.

The financial governance system of the TUs in Ghana is highly regulated by laws, such as Article 187 (2) of the 1992 Constitution, Financial Management Act, 2016 (Act 921), Public Financial Management Regulations 2019 (L.I. 2378), and the Public Procurement Act, 2003 (Act 663), as well as the Public Procurement (Amendment Act, 2016 (Act 914), Income Tax Act, 2015 (Act 896), and Value Added Tax Act, 2013 (Act 870). Some major internal challenges TUs in Ghana face, where financial governance is concerned, are non-compliance with financial regulations and internal control systems that are ineffective.

The state plays a crucial role in financing the central TU operational costs,, according to Universities South Africa (USAf) (2016), the state subsidy to these institutions has been steadily declining, whereas the cost of education has been increasing. This has added pressure on TUs to find ways of sustaining themselves, using alternative sources of revenue. Studies have highlighted universities are confronted with financial sustainability and have practiced different financial strategies to address the associated issues (Wangenge-Ouma and Carpentier 2018; Cloete, Sheppard and Schalkwyk 2016; Lourens 2016). Therefore, cost-saving becomes difficult for the TUs, which requires quality in staff, equipment, facilities, and management. Consequently, it is necessary for TUs to remain up-to-date with Government regulations/laws and amendments. In order for the TUs to be progressive and well-informed, government regulations and laws should be strictly complied with.

3.3.7 Lack of Financial Monitoring systems in the technical universities (TUs)

Monitoring of public activities and their evaluation starts with fiscal decentralisation that requires institutions that are sound to ensure financial accountability. Where such institutions are absent, public institutions such as local governments experience waste, inefficiencies, and corruption (Yilmaz *et al*. 2013). accountability failures in any local government is a reflection of activity monitoring that is weak (Mukyala *et al*. 2017). It follows then that internal controls need to be reviewed by the TUs and strong monitoring mechanisms established (Mukyala *et al*. 2017).

When organizations monitor their operations, various practices can be used to continue internal control practices, including training and feedback, as well as financial regulation enforcement (Makgatho 2013). However, some gaps seem to exist in procedures that effectively follow-up, potentially ensuring the correct action change in the TUs. Several studies confirm operationalising monitoring and evaluation systems for government organisations that are effective and efficient, which will ensure efficient service delivery and strategic allocation of resources (Ojok 2016; Okello 2017; Kariuki & Reddy 2017).

Although institutions such as the AG department, Parliament, and other anti-corrupt agencies monitor financial governance of the TUs, the monitoring systems seem to be inadequate and thereby, affect these universities' financial governance. The AG Reports (2018: 7, and 2020: 6) cited numerous financial infractions and irregularities due to a lack of monitoring of financial and operating TU activities in Ghana. As noted by Ferry, Eckersley, and Zakaria (2015), decision-making is, nonetheless, hindered by excessive monitoring of rules and procedures, which leads to negative operational performance. Kisanyanya and Omagwa (2018) illustrate financial monitoring of public institutions of higher learning in Kenya positively and significantly affect financial performance.

3.3.8 Limits of state regulations

The Parliament of Ghana in 2020 restricted tuition fee increments by universities, resulting in a major financial crisis in the HE sectors. Moreover, universities worldwide are concerned with the rapid decline in state support to institutions of higher learning, with decreasing state support increasing the financial vulnerability of universities (Gebreyes 2015). While government interventions in addressing student demands have left universities with a financial burden and the threat of a financial crisis, universities face challenges to raise revenue from other sources of income. Oketch (2016) outlined the continuous decline of state support subsidies to public universities as a global challenge, hence, competition towards third-stream income is quite common.

The ‘fees-must-fall’ campaign in South Africa in 2015 opened a controversial topic for TUs and government (Muller 2018), with the National Union of Ghana Students (NUGS) sending out a call to students in December 2022, to show their support for universities to review their fees (Daily Mail Ghana 2022) under #FeesMustFall, adding pressure on universities to seek extra funds to ensure education is accessible to those who qualify. As much as TUs are cautious of this revenue source, there is a steady growth in revenue generated from this income stream (Wangenge-Ouma and Carpentier 2018).

3.3.9 Infrastructure affects financial governance strategies

Infrastructure denotes government created services, comprising facilities, basic equipment, and structures that include education, telecommunication, and electricity, in addition to roads, bridges, and water supply, as well as sanitation and sewerage, which are essential in government institutions for their operations and functionality (Garsous 2012: 01; Gaal and Afrah 2017: 49). In the interim, financial governance strategies are measured by the availability of resources, containment of rapidly rising costs of offering academic activities, research, and guaranteeing surpluses for future investments in academic activities and research (Afriyie 2015). Lack of accessible and well-functioning good infrastructure severely hinders economic development (Ehler 2014: 01).

Duffin (2020) discussed four sustainability measures: access to capital, profitability, reporting, and planning. These involve (1) analysing current and future demands and measures of anticipating targeted growth, (2) analysing the success or failure of a business through profit measurement, as well as (3) reporting, and (4) planning. Furthermore, these factors can be related to TUs; that is, (1) capital as the pool of revenue sources to the universities, (2) profitability as the ability to cut costs and maintain the surplus position of the university, (3) reporting as the fulfilment of dependency and keeping society informed, and last, (4) planning as the proper allocation of resources in a cost-efficient manner to maintain the surplus position (Benjamin 2017). Moreover, the cost of offering HE is continuously increasing, while supporting technologies are dynamically changing (Kharusi and Murthy 2017).

Among other challenges for the TU, is the capacity of lecture halls and residences that are not increasing relative to the envisaged growth in enrolment. Accordingly, extending university infrastructure is among investments currently considered at the heart of university property investments (Kharusi and Murthy 2017). Infrastructure that is well-functioning is considered the principal business growth driver, along with competitiveness, market access, and making economic opportunities available, as well as promoting job creation (Jafta 2017: 04).

3.3.10 Competition among Technical Universities (TUs)

A great threat is posed to firm growth and survival by competition, however, simultaneously, “competition is often the main factor in achieving economic growth, as it motivates and pushes firms to be more productive” (Soini and Veseli 2011: 50). With competing firms not having control over the prices, services and products other firms offer, competitors of the firm are an important part of its external environment (Beach 2017). When a firm implements value creation strategies not introduced by other, potential competitors, it holds a competitive advantage (Barney 1991: 103).

Competitive advantage, according to Porter’s (1985) theory, measures the success of a firm in relation to its competitors. Essentially, a firm utilises competitive advantage when consumers are offered greater value through the lowering of product costing or services or providing services or products of a higher quality, thereby justifying higher prices (Pickard-Whitehead 2018). The argument put forward by Kraja and Osmani (2013: 81) is that tangible assets are held by manufacturing SMEs, however, strong intangible assets are possessed by other enterprises, with both able to create competitive advantage that is sustainable. These critical resources can, by generating a lower cost, or a higher benefit for the firm, generate value that is residual for the same value that is delivered, thereby supplying the company with increased profit margins (Ong, Ismail and Goh 2010: 379).

3.3.11 Technology

It is crucial for TUs and public sector entities to adopt IT nationally, to ensure the development and survival of financial governance, as it impacts the competitiveness and financial performance of a firm (Bhatt & Bhatt 2017; Ducassy & Guyot 2017; Pillai & Al–

Malkawi 2018). To remain competitive, adoption of IT is a key element (Jabar, Soosay and Santa 2010; Tarute and Gatautis 2013: 1224; Cuevas-Vergas, Enriquez and Adame 2015: 305; Agwu 2018). This adds to findings by Ghobakhloo *et al.* (2012: 58) that significant investment in IT is needed in becoming more competitive (Premkumar 2003; Clibanu and Neamtu 2017). Support is provided by the Integrated Financial Management Information System (IFMIS) for management reporting, decisions regarding policy, fiduciary responsibilities and auditable financial statement preparation. Okello, Migiro and Mutambara (2017) state adoption and implementation of IFMIS exceeds technology and the ability of individuals to achieve their anticipated goals by working around systems; this consists of different measures including organizational, legal, environmental, and ethical, as well as cultural factors that must be taken into account to ensure implementation and execution is successful.

In trying to pursue technological innovation, the TUs face severe challenges (Gnyawali and Park 2009: 308; Farsi and Toghraee 2014: 01). Opiyo (2017) confirms this, arguing the failure of most reforms are not as a result of reform programme content or technical aspects, but can be ascribed to human ability. In other words, these factors ought to be examined critically for successful IFMIS implementation in TUs, because these factors impact IFMIS implementation to a large extent. Included in the range of factors are limited financial resources, limited capacity in technical skills of entrepreneurs, their age, and insufficient opportunities for training (Elbeltagi, Al Sharji and Hardaker 2013; Jafarnejad *et al.* 2013; Kumar, Rose and D'Silva 2008; Kusumaningtyas and Suwarto 2015).

Ungan (2007) found problems regarding planning, installation, and implementation stages of adopted machinery and equipment can prevent the TUs from enjoying the benefits of technologies. Furthermore, Steyn (2012: 29) noted the contributory factor of the dearth of technical knowledge and skills when decisions relating to an approach favouring IT adoption are made. Although there are major obstacles to acquiring abilities in technological innovation, there is a need to overcome these critical factors Migiro (2006: 35). As argued by Alam and Noor (2009) and the Xero Report (2017), notwithstanding the expense in the adoption of technology, this is outweighed by the associated benefits and consequent innovation and sustainable growth. It has been found that rapid technology adoption significantly enhances firm success (Eke, Aigbavboa and Thwala 2015: 08).

Kapurubandara (2009: 20) suggests companies need awareness in terms of “strategy, processes, technology, and applications, in addition to the skills” needed to plan and coordinate their transformation processes in a strategic manner. Currently, insufficient technological advancement, specifically the use of information and communications technologies (ICTs), critically affects financial governance strategies of TUs.

3.3.12 Challenges of dynamic capabilities

It is undeniable that HE funding has become a major challenge in recent years, particularly for TUs in Ghana. This is evidenced by some universities dealing with either flat or falling enrolment levels (Ahmad, Farley, & Naidoo 2012) and the TUs in Ghana are no exception.

For this reason, TU administrators must make strategic decisions regarding the best blend of non-traditional activities and established boundary-crossing traits (Atuahene 2011). Academic entrepreneurship endeavours to develop campus business models further than teaching and research, to enable better accomplishment of the fundamental duties of a university. This could involve the direct pursuit of new financing, in some circumstances, by means of off-campus partnerships with entities (Akinyemi 2012). TUs that face volatility, uncertainty, complexity, and ambiguity (VUCA) are unable to merely be administrators that are efficient, they must be entrepreneurial in their actions and decision-making. Since universities are secular institutions and one of the most important social organizations, they are now embedded in a complex scene of great change and uncertainty in the economic, political, social, and educational, as well as technological, and environmental fields. This necessitates new management models to make them more agile, flexible, and responsive to social demands (Aktas 2015).

The growing turbulence and uncertainty in the environment of modern organizations also has an impact on universities. As a result, studies have been conducted worldwide (Australia, Canada, China, and the Netherlands, as well as Singapore, Germany, and the USA) to identify entrepreneurial universities (Delke 2015). These studies have identified the following core factors as traceable to entrepreneurial universities: adaptation processes, organizational changes, internal and external strategies, and types of entrepreneurial activities, in addition to academic characteristics (Clark 1979; Cumming and Walz 2010; Degefa 2011; Filatotchev, Chahine, and Bruton 2015).

3.3.13 Lack of innovation

The ability to generate new ideas to keep operations, products and services fresh is one of the keys to any successful business, with “innovation” as the process that brings those ideas to reality (Brooks 2013; Schmieder 2014: xix). The interrelationship between the structure of a company and its ability to resist or encourage innovation is frequently emphasised by scholars, with innovation perceived as a main motivator in enhancing economic competitiveness globally (Brichfield 2000; Priede and Pereira 2013: 212) and is essential to the survival and performance of many businesses (Talegeta 2014: 84; Demirciouglu 2017: 800). Therefore, innovation manages matters in a different way that is better, takes place more rapidly and in more cost-efficient way (Tunney 2014).

Accenture (2016: 01) established that being able to develop new ideas, is seen by more than 90 percent leaders to ensure the success of their organization’s strategy in the long-term. However, it seems the TUs in Ghana often fail to apply effective financial governance strategies, due to a lack of innovative strategies.

The capabilities of a university to seize opportunities are supposed to translate these probabilities into actions. It is a vacuous exercise to merely diagnose opportunities and threats a university faces, without converting these into action. Academic entrepreneurship, as noted earlier, is to exploit a variety of internal and external stakeholder resources, serving particular interests of the university, in addition to wide-ranging social and economic reasons. To serve its broader purposes, a university has to create value and capture some part of that value for multiple constituents, with the value possibly not immediate or monetary. For instance, “breakthrough research in new fields can enhance a university's stature and help it to attract both funding and talent. Designing a value-capture mechanism for a given entrepreneurial [initiative] requires the capability to develop various types of business models” (Teece 2010: 191).

In the setting of a university, where a profit-and-loss statement does not accompany most activities, business-model thinking, nevertheless, has the potential to assist university leadership in defining relevant stakeholders’ value proposition for students, faculty, and alumni, systematically consider the way to deliver value, and acquire benefits for the university such as financial and other benefits. As example, in TUs becoming more involved with incubators and business venture start-up opportunities, early decisions must be taken with regard to the extent of seeking the value (if any) these initiatives generate.

In addition, also involved in seizing capability, is the establishment of connections among organizations, groups and individuals that are fruitful; the design of business models; assembly of resources, both financial and non-financial; as well as the application of entrepreneurial skills. Possibly less obvious, but as important, is the development and implementing of appropriate physical spaces in or near a university campus, to enable initiation of the incubation process for business or technology so it may thrive. The capability of seizing, furthermore, involves the selection of suitable, university partners that are knowledgeable, which in turn, indicates the team effort required for successful university leadership, emphasising the paramount importance in managing partnership teams.

Effective university leaders can, moreover, encourage collaboration among faculties and departments through the use of their institutions' collegial environment, supporting academic entrepreneurship and caring for the end-user. TU leaders must, therefore, remain informed and comprehend how to deal with threats and opportunities, capture value and in this way, serve the broader purposes of a university through innovation.

3.4 FINANCIAL GOVERNANCE PRACTICES AND GROWTH

Generally, financial governance is considered the lawful exercise of power and authority in the administration of an organization's financial resources (Fiador 2013). It is a framework that supports accountability and transparency, while encouraging effective practices in institutions. This allows university stakeholders to be assured they are operating effectively and efficiently, through the application of appropriate financial governance standards (Collier 2008). For several key reasons, financial governance is thought to be closely tied to accountability in universities that, in turn, brings growth.

First, evaluating university performance under financial governance procedures will guarantee institutional accountability to stakeholders. Second, effective financial governance, in terms of structures and procedures, will include management behaviour motivated by achieving social, as well as economic goals; resulting in improved university accountability practices (Short *et al*. 1999). Third, by monitoring university performance and activities, good financial governance methods can strike a balance between social and economic goals (Ebrahim *et al*. 2014). Additionally, financial governance policies are typically linked to strong financial success, which will strengthen growth (Brown and Caylor 2006).

H_1: *Financial governance practices have a positive significant relationship with the growth of technical universities.*

3.5 ENTREPRENEURIAL LEADERSHIP AND GROWTH

The literature on entrepreneurship and leadership has a strong focus on the relationship between the two (Ladzani and Van Vuuren 2002). According to Lippitt (1987), who first used the term, a leader who possesses the qualities of creativity, risk-taking, and charm is known as an entrepreneurial leader. Numerous earlier academics have claimed entrepreneurial leadership is a sign of successful organizations (Morse 2014). Manzini (2010) asserts entrepreneurial leaders play a crucial role in the development of new business endeavours; hence, it is crucial they continue launching new businesses out of interest. Entrepreneurs are, unquestionably, seen as the leaders of the organization. Since entrepreneurs and leaders share many traits, their organizational performance impact is profound (Pruthi 2014).

The development of new and advanced opportunities, empowerment of the human population, establishment of a capable and efficient HR system, and setting the ultimate goals that should not contain any element of ambiguity, are all examples of factors under the umbrella of entrepreneurial leadership. According to Nga and Shamuganathan (2010), having a positive influence and the capacity to direct team member performance for the purpose of achieving organizational goals can be done through creating, recognising, and taking advantage of the many opportunities in the field of entrepreneurship. By engaging in entrepreneurial activities, entrepreneurial leaders serve as learning role models for their subordinates and inspire their followers to adopt similar behaviours (McKeever *et al*. 2014). Based on this argument, the following hypothesis was formulated:

H_2: *Entrepreneurial leadership has a positive significant relationship with the growth of Technical Universities.*

3.6 ROLE OF ENTREPRENEURIAL LEADERSHIP IN THE RELATIONSHIP BETWEEN FINANCIAL GOVERNANCE PRACTICES AND GROWTH

Since Cadbury (1992), the topic of corporate governance has been defined and discussed. Solomon (2007: 4) stated corporate governance is "the system of checks and balances, both internal and external to companies, that ensures that companies discharge their accountability to all of their stakeholders and act in a socially responsible manner in all areas of their business activity." However, the Cadbury Report defines corporate governance as simply "the system by which companies are directed and controlled." According to this definition, corporate governance is multifaceted and comprises a variety of components, such as financial, employee, and clinical governance. In more recent years, the concerns of governance in universities have, nonetheless, mostly been studied in terms of clinical and general governance difficulties. Therefore, few recent studies examine the financial aspects of university governance in either the industrialised or developing world.

With sound financial governance practices, it is possible to build a system devoid of institutional resource theft and embezzlement. These practices ensure an organization's financial goals have been outlined and accepted by the board, an audit committee is in charge of overseeing the financial aspects of governance, the board has clearly defined responsibilities for financial management, throughout the organization, and standing financial instructions have been accepted by the board and distributed, with financial risk management procedures in place across the organization, and all financial management systems have an efficient and recorded method for internal control. The outcome factor becomes institutional growth. (Solomon 2007: 4)

The Schumpeter innovation theory supports the notion that entrepreneurial leadership can impact firm growth. In finding new possibilities, obtaining the necessary resources to delve into those opportunities, and forming an organization to administer and deal with those resources, the entrepreneurial manager produces new value during the entrepreneurial process (Bhave 1994; Wickham 2006). Entrepreneurial leadership could play a mediating or a moderating role in the relationship between financial governance practices and growth of TUs. In view of this the following hypothesis was formulated:

H_3: *Entrepreneurial leadership plays a significant role in the relationship between financial governance practices and growth of Technical Universities.*

3.7 CHAPTER SUMMARY

Chapter Three provided a comprehensive overview of relevant recent literature pertaining to the critical factors affecting financial governance strategies of the TUs in Ghana. The chapter further provided a detailed theoretical framework in support of the study. The reviewed literature revealed financial governance strategies are affected by both internal and external environmental factors. The Internal factors found to affect financial governance used by the TUs included management competence, lack of internal audit independence, inadequate professional capacity of staff, financial irregularities, lack of risk management procedures, and lack of financial reporting skills. The external factors also included pressure to meet the expectation of stakeholders, political factors, economic factors, inadequate budgetary allocations by government, lack of financial monitoring systems, lack of innovation and the competition among the TUs. These factors may serve to help or, more often, hinder financial governance of the TUs in Ghana and the drive for dynamic capabilities and financial leadership to attain sustainable growth. These challenges have been critically evaluated and identified in line with the study objectives.

In summary, this chapter highlights the multifaceted nature of factors influencing entrepreneurial financial governance strategies. It underscores the importance of addressing both internal challenges, such as monitoring systems and internal controls, and external influences, including political, socio-economic, and regulatory factors, to enhance financial governance effectiveness and organizational resilience.

CHAPTER FOUR: RESEARCH METHODOLOGY

4.1 INTRODUCTION

The previous chapter discussed and analysed literature on critical factors affecting entrepreneurial financial governance strategies of the TUs in Ghana.

The purpose of this chapter is to provide an overview of the approaches and techniques used to conduct this research. Howell (2013) describes methodology as general research strategy responsible for providing an outline of how the research project should be conducted and the methods to be used. The purpose and function of research methodology are to find answers to the research questions (Kumar 2014: 07). The chapter will, therefore, explain and discuss the research paradigm the research design, research method, population, and data collection instruments, along with validity and reliability, as well as ethical considerations.

4.2. RESEARCH PARADIGM.

A paradigm refers to a fundamental set of views that scientists share. It encompasses agreements on how problems should be understood, how we perceive the world, and how research should be conducted. Paradigms consist of fundamental beliefs or assumptions that direct our investigations in certain study endeavours. Four primary paradigms commonly employed in research are Positivism, Interpretive, Advocacy, and Pragmatism (Rahi, 2017). Hampson and McKinley (2023) contend that methodologists are progressively employing pragmatism as a rationale for transitioning towards method acceptance. This involves the utilisation of either a singular approach, many approaches, or a combination of approaches. In pragmatism, the importance of research questions implies that both qualitative and quantitative research methods are necessary and preferred in order to address specific questions or sets of questions (Capps, 2023). In pragmatism, knowledge is considered a contextual attribute that develops via everyday experiences and is evaluated based on its practical outcomes. (King, 2022) Various paradigms hold distinct assumptions and perspectives about ontology and epistemology.

This study investigates the key elements that influence the strategies of financial governance in entrepreneurship, specifically focusing on the Pragmatism paradigm. The researcher sought to establish the correlations between technical universities, leadership, and growth in Ghana. This would allow for drawing conclusions about the key aspects that influence the financial governance practices of these technical universities.

Pragmatism encompasses the consideration of both quantitative and qualitative aspects of events, which becomes advantageous in the examination of financial governance initiatives (Capps, 2023). The researcher utilised mixed method measurements to ascertain the effectiveness of various strategies, developments and facilitate analyses among technical universities in Ghana. This is especially significant when examining entrepreneurial financial governance techniques, as it allows researchers to make inferences beyond technical universities. Pragmatism prioritises the promotion of transparency in both research methods and conclusions, enabling the replication of studies by other researchers and the verification of their outcomes. This strengthens the trustworthiness and dependability of the research results, which is especially crucial when investigating complex problems like financial governance.

The study of entrepreneurial financial governance solutions in technical universities in Ghana is well-suited for the application of pragmatism for the following reasons: This technique in the study of entrepreneurial financial governance strategies refers to the process of combining quantitative financial data with qualitative interviews, document analysis, and observations. This approach aims to gain a thorough understanding of financial governance practices and their influence on the growth of technical universities. Pragmatism promotes the prioritisation of practical issues and the identification of the most efficient methods to address them.

In the context of mixed methods research, this refers to the process of choosing appropriate methods (quantitative, qualitative, or a combination of both) depending on their ability to effectively address the specific research topic at hand (Creswell, J. W., & Plano Clark 2018). Through a pragmatic approach, researchers can explore entrepreneurial financial governance models to not only create new knowledge but also offer practical insights and recommendations for improving financial management practices in technical universities. This is consistent with enhancing institutional efficiency, fostering innovation, and advancing higher education.

4.3 RESEARCH DESIGN

The study made use of a mixed methodology design, comprising the gathering and analysis of quantitative and qualitative data. It also promotes understanding of human experiences that cannot be quantified (Kumar 2011). The approach is chosen, because the researcher would want to describe the phenomena that exist at the time of the research. In addition, through a quantitative approach the researcher can examine quantifiable relationships among the research variables for statistical analysis (Bianchini *et al.* 2015). A questionnaire and interview guide were developed for the collection of both quantitative and qualitative data from respondents and participants. Qualitative research involves collecting and analysing non-numerical data (for example, text, video, or audio) to understand concepts, opinions, or experiences and is used to gather in-depth insights into a problem. The interview helped to articulate phenomena the questionnaire failed to address. Using a mixed method, the researcher aimed at presenting a comprehensive analysis of the research problem (Creswell 2009). Using a mixed study approach enabled the researcher to bring the critical factors to light affecting entrepreneurial financial governance strategies in Ghanaian TUs.

4.4 STUDY POPULATION / TARGET POPULATION

The study population consisted of the 10 TUs in Ghana and the target population was made up of Senior staff of Centre for Business Development and Entrepreneurship, Finance departments and Directorate of Internal Audit of the 10 TUs in Ghana. This population composition was used, because it comprises the units in the TUs privy to the formulation and utilisation of financial and entrepreneurial philosophies in the Universities. Furthermore, they constitute the key decision-making body with regard to financial and entrepreneurial practices in the Universities. Since the study is a mixed methods study, the population was provided for both the quantitative and qualitative research objectives. Table 4.1 presented on the population composition for the quantitative study.

Table 4.1: Population Composition for the Quantitative Study

Composition	Number of Technical Universities	Number Per Technical University	Total Number
Directorate of Finance	6	8	48
Directorate of Audit	6	8	48
Deputy Directors for Entre. and Business Innovation	4	4	16
Senior Administrators	6	8	48
			160

Source: Ghana Tertiary Education Commission (2020)

Table 4.2: Population Composition for the Qualitative Study

Composition	Number of Technical Universities	Number per Technical University	Total Number
Director Finance	6	1	6
Director of Entre. & Business Innovation	6	1	6
			12

Source: Ghana Tertiary Education Commission (2020)

4.5 SAMPLING AND SAMPLING TECHNIQUE

In the case of the qualitative study, 12 participants were selected by means of a purposive sampling technique, as this technique allows the researcher to interact with respondents the researcher believes can provide the needed information. In terms of the quantitative study sampling technique, a census sampling technique was used, because it allows the researcher to interact with all respondents that define the population. This technique was chosen due to the size of the population for the quantitative study.

4.6 SAMPLE SIZE

For the purposes of this study, 160 questionnaires were Developed with an online tool (Google forms) and access provided via a link accessed on a social media platform

(WhatsApp) to respondents and all were returned. In total, 160 respondents participated in the quantitative study which gave a response rate of 100 percent. This response rate meant representation obtained of the population was excellent, thus, it enabled drawing conclusive generalisations.

In total, the study used 160 respondents for the quantitative study and 12 participants in the qualitative study, with the minimum requirement for sample adequacy in SEM met by the 160 respondents for the quantitative study (Hair *et al*. 2017).

4.7 DATA COLLECTION INSTRUMENTS

4.7.1 Structured Questionnaire

In this research, the instrument used in the quantitative study comprised a structured questionnaire, carefully designed to cover relevant study themes. The developed questionnaire was used as data collecting instrument via link through WhatsApp. The design of the questionnaire was based on the study objectives the research sought to address. The instrument was explained to the respondents, as well as the process being voluntary and confidential, requiring approximately 10 minutes for the respondents to complete the questionnaire.

4.7.2 Design of the Questionnaire

The research instrument consisted of 52 items, with various levels of measurement both at a nominal or ordinal levels. The questionnaire was divided into five sections. Section A collected socio-demographic information of respondents, section B delved into the internal and external factors affecting financial governance, while section C collected information on Entrepreneurial financial governance. Section D elicited responses on the role of entrepreneurial financial leadership governance and finally, section E focused on the effect financial governance has on the growth of TUs in Ghana.

The formulation of the questionnaire was achieved through a review of the relevant literature, specifically on critical factors affecting financial governance, among others. Both internal and external environmental factors were considered and use was made of a 5-point Likert scaled questionnaire (Appendix A), as shown in the questionnaire sample below:

Sample of the questionnaire

SECTION B: Factors Affecting Financial Governance

With regards to factors affecting Financial Governance, please tick [√] the appropriate number to indicate the extent to which you agree or disagree with each statement. The item scales are five-point Likert type scale with **1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A), 5 = Strongly Agree (SA).**

Internal Factors	**SD**	**D**	**N**	**A**	**SA**
	1	**2**	**3**	**4**	**5**
Right Management Competence					
Ineffective Internal auditing					
Lack of Financial Management Skills					
Inadequate Professional Capacity					
Lack of Innovation and Learning					
Lack of Technological Skills.					
Financial irregularities					
Ineffective Internal Controls					
Lack of effective Risk Management Procedures					
External Factors					
Political Factors					
Economic Factors					
Limit of State Regulations					
Lack of Infrastructure					
Competitions among Technical Universities					
Inadequate Budgetary Allocations					
Lack of Evaluation of Financing Options					
Ineffective Financial Monitoring Systems					
Lack of Dynamic Capabilities to venture into Academic Entrepreneurship					
Lack of Technology to be abreast with Financial Governance Strategies					

4.7.3 Design of the interview

The instrument for collection of the qualitative data was an interview guide (Appendix B), developed to enable the researcher to interview the participants regarding matters the questionnaire did not cover. Interviews were conducted in-person at the various participants' offices, with a duration of approximately 20 minutes per interview. Questions covered in the interview guide are as follows:

1. How is entrepreneurship shaping financial governance at Technical Universities in Ghana?
2. What are the possible ways internal and external factors are contributing to drive for entrepreneurial financial governance strategies in Technical Universities in Ghana?
3. How is leadership integral to entrepreneurial financial governance strategies?
4. How does benchmarking entrepreneurial financial governance strategies improve the fortunes of technical universities?
5. What possible improvement can be made to enhance entrepreneurial financial governance strategies of the Technical Universities?

4.8 DISSEMINATION OF QUESTIONAIRE

The questionnaire was developed and administered through google forms, with the WhatsApp social media platform used to provide access to participants. The link to google forms was provided to the platform administrators to post and encourage staff to complete the forms. With regard to the interview, once the researcher obtained permission from the various universities, participants were personally visited in their offices and interviewed.

Ethical approval was sought from the FRC and the IREC at the DUT. Participants were informed with regard to the study, its purpose, procedural outline, potential risks/discomfort and benefits, and assured their responses would be confidential.

4.9 PILOT TESTING OF THE DATA COLLECTION INSTRUMENTS

The questionnaire and the interview guide were pilot tested under the same conditions used in formal administration. Pilot studies frequently reveal insights into the investigated problem that are important and could result in the problem being reconceptualised or refining the research questions (Saunders *et al.* 2009). The questionnaire was pilot tested in institutions with the structure and texture the same as a TU. The questionnaire was pilot tested in the four main public universities in Ghana; University of Ghana, University of Cape coast, Kwame Nkrumah University of Science and Technology and University of Education Winneba, where the sample questionnaire was administered to university directors and finance deputies.

The sample size for the quantitative pilot study was 18 respondents; and that of the qualitative study was 8 participants.

4.10 DATA ANALYSIS

Quantitative data were collected and checked for exactness and comprehensiveness. The data were then summarised and thereafter, coded for easy classification and tabulation. The analysis and discussion focused on 160 participants drawn from six TUs in Ghana. Questionnaires were distributed to the 160 respondents across various offices within the technical universities in Ghana. With the questionnaire as primary tool used for data collection, a response rate of 100 percent was achieved for this study. Analysis of the collected data from respondents was achieved using SPSS version 27, with results presented as descriptive statistics through the use of graphs, cross tabulations and other figures that illustrate the collected quantitative data.

For the purpose of this study, some inferential statistic techniques including cross tabulation analysis, chi-square test of relationships and correlation analysis, and more, were employed. The literature reviewed prior to this chapter served as a blueprint for this study, providing a broad summary of information pertaining to entrepreneurial financial governance, its effects on the growth of the TUs and the role of entrepreneurial financial leadership governance, among others.

For the qualitative data, once transcription was completed, thematic network analysis was used to generate themes aligned to the research problems, from the generated textual data, as suggested by Braun and Clark (2014). Data were coded using NVIVO 12 plus software.

4.10.1 Frequency Analysis

To establish the frequency of certain responses made to a particular question and to check data coding, frequencies were used (Ho 2013). When data are not captured correctly, it is evident from the responses not equalling the total of the sample (Bryman and Bell 2015:

347; Ho 2013). Results analysis and study conclusions were enabled through the information gathered from the frequencies.

4.10.2 Descriptive Analysis

Descriptive statistics are distinguished from inferential statistics, in that descriptive statistics aim to quantitatively summarise a data set, rather than being used to support inferential statements regarding the population the data are thought to represent. In this study, descriptive statistics were generally presented along with more formal analyses, to offer the reader an overall sense of the data analysed.

4.10.3 Inferential Statistics - Chi-square test and Factor Analysis (FA)

The use of Principal Component Analysis (PCA) or FA for a study means the data have to comply with a set of criteria, such as the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity. As shown in Table 5.2, it can be observed all categories of questions acquired a KMO value above 0.5 and a Bartletts Test of Significance value less than an alpha value of 0.05.

FA is typically employed in survey research, where the researcher wants to “represent a number of questions with a small number of hypothetical factors” (Traynor and Andrews 2015: 479). Participants answered seven separate questions including critical factors affecting entrepreneurial financial governance strategies and the reliability of the financial governance strategies. FA was used to determine whether the seven measures identified, measure the same aspects. Should this be the case, these measures “can then be combined to create a new variable, a factor score variable that contains a score for each respondent on the factor.” The combination of variables that form a component were, therefore, named and discussed as tangible factors. the KMO and Bartlett’s Test were, in this case, conducted on the Likert scale items, to respectively determine a measure of sampling adequacy and sphericity. Therefore, FA is “applied to establish the combined effect of the most relevant components of this research reduction” (Traynor and Andrews 2015: 479).

4.11 VALIDITY AND RELIABILITY

Where precision is concerned, the two most important aspects are reliability and validity, with the computation of reliability is achieved through several measurements taken on the same subjects. The “acceptable” reliability coefficient is deemed to be 0.70 or higher. In addition, the Cronbach’s alpha score for all questionnaire items was determined, with reliability analysis conducted on all categories of statements in the questionnaire. Questions within the questionnaire were sub-divided into themes in accordance with the research objectives. The reliability statistics revealed (Table 5.57) the recommended Cronbach's Alpha value of 0.7 was exceeded in all categories of statements. This suggests test items used for scoring are reliable and consistent.

4.11.1 Quantitative Data

When an instrument measures what is intended to be measured it is considered reliable and valid, which also applies when there are no measurement errors that improve the accuracy of the study. In order to ensure validity and reliability, items use to measure the study variables were adapted from already validated scales from previous research to measure the constructs. The instrument was subjected to two tier scrutiny, from expects in the field and the research supervisor, to guarantee content validity. Furthermore, the instrument was subjected to pilot testing to identify challenges with the scales prior to their use in the study. The questionnaire comprises themes of related questions; in other words, questions in a questionnaire that measure the same concept are grouped to improve internal consistency of the scale.

To ensure data collection instrument validity, the researcher performed content validity, which involved using experts recognised in the area of study to provide their opinions on the instrument’s validity. Further to this, challenges were dealt with early through the pilot study, which avoided main study limitations; this allows evaluation of the research method appropriateness and suitability, which improves questionnaire validity (Hussain 2016: 107).

4.11.2 Qualitative Data

The validity and reliability of qualitative research represent the key aspects of the quality of research. Validity relates to the appropriateness of any research value, tools and techniques, and processes, including data collection and validation (Mohamad *et al*. 2015).

When the reliability and validity parameters are thoroughly dealt with, they assist in distinguishing good and bad research, assuring readers of credible and trustworthy study findings. Therefore, respondent validation was applied in this research, this meant the initial results were tested with participants, to determine whether the truth of the findings still remain. In this way, researcher subjectivity is prevented from influencing the interpretation of data.

4.12 RECRUITMENT PROCESS AND ETHICAL CONSIDERATION

Participant invitation was requested physically and via electronic research instrument distribution. The questionnaire was administered through google form and was submitted to the participants through WhatsApp. The link to google form was given to the administrators of these platforms to post and encourage staff members to fill the forms. With respect to the interview, the researcher personally visited the participants in their offices and interviewed them after permission was granted by the various universities. Ethical approval was obtained from the DUT FRC and IREC. Participants were informed regarding the purpose of the study, procedures to be followed, any risks, discomfort and benefits, as well as their confidentially, in addition to completing a consent form.

The letter of information and the consent form confirm the DUT Faculty of Management Sciences REC ethical compliance standards, with the study reviewed by this committee, passing it under ethical category 2 (minimal research ethics compliance required). The FRC ensured full awareness by participants regarding the nature of their participation, with assurances of equal protection (Kruger *et al.* 2014: 08).

4.12.1 Anonymity and Confidentiality

Respondents were assured any information they provided would be treated as confidential and only used for academic purpose, with their identity remaining anonymous. In research, anonymity ensures readers cannot identify the respondents from their responses (Babbie 2020: 71). All participants were assured of their anonymity and the data they provided would not be used in any platform other than for research purposes. A cover letter and letter of information also detailed the terms and conditions of study participation. All hard copy confidential data will be safely stored in a locked office filing cabinet for five years, with electronic data encrypted, protected by password and saved in the cloud for the same timeframe, with a two-factor authentication and encryption cloud service used. Once this time has passed, all electronic records will be deleted permanently in the cloud and all hard copies shredded. Access to data that are confidential and sensitive will, once stored, only be accessed by the researcher.

4.13 Chapter Summary

This chapter examines the methodology used to gather and analyse data for this study, including the research design and target population. This research included an explanation of the sampling method employed and the rationale behind its selection. It also discussed the data analysis process, the tools utilised for the analysis, and the purpose for their usage. The various forms of analysis were also addressed. The concepts of reliability and validity, together with the inclusion of pretesting, were adequately conveyed. The primary objective of the chapter was to elucidate the complete process of conducting the study, often known as the research technique. The upcoming chapter will centre on the display and analysis of survey results. The study employs a mixed-method research approach, integrating qualitative and quantitative methodologies to obtain a comprehensive comprehension of the intricate phenomenon of entrepreneurial financial governance within technical universities in Ghana. This methodological approach, based on the pragmatism paradigm, enables flexibility, integration, and harmonisation of many data sources. As a result, it improves the validity and dependability of the conclusions. The sample strategy employs a purposive sampling method to choose individuals who have pertinent skills and experience in financial management, governance, and entrepreneurship within technical universities in Ghana. The sample comprises university administrators, Directors of Finance, Directors of Internal Audits, and personnel of Entrepreneurship and Business Developments who are involved in the decision-making process. Qualitative data analysis encompasses the process of systematically examining and interpreting interview transcripts, focus group discussions, and documentary evidence through thematic classification and categorization. Quantitative data analysis utilises statistical methods, including descriptive statistics, regression analysis, and correlation analysis, to detect patterns, correlations, and trends within the data. The mixed-method research technique, guided by the pragmatism paradigm, provides a strong and adaptable framework for studying important elements that impact the financial governance practices of entrepreneurs in technical universities in Ghana. This methodology combines qualitative and quantitative methodologies to gain a detailed understanding of how institutional environments, governance practices, and financial outcomes interact. It ultimately helps in formulating evidence-based policies and managing institutions effectively.

CHAPTER FIVE: DATA ANALYSIS, INTERPRETATION AND DISCUSSIONS

5.1 INTRODUCTION

The previous chapter extensively discussed the design of the study, its population and sampling, as well as data collection and analysis technique adopted, including other parameters. The primary aim of this chapter is to present (in the form of tables, charts and figures) a comprehensive quantitative report of the data obtained as a result of field work, and interpret these findings in relation to the study objectives. As indicated, a total of 178 respondents participated in the quantitative study and 20 took part in the qualitative study making a total of 198 participant for the study. It must be emphasised, in respect to the quantitative study, 18 participants of the 178 from the traditional universities were used for the pilot study, due to their unique characteristic with the TUs in Ghana, namely University of Ghana, University of Cape Coast and University of Education Winneba. The survey was piloted to respondents across various offices within the University. Similarly, eight of the 20 participants were used for the qualitative pilot study.

These piloted participants were excluded from the main study, resulting in 160 participants for the quantitative and 12 participants for the qualitative study, all from the TUs in Ghana. The analysis and discussion focused on 160 participants drew from six TUs in Ghana. With the questionnaire being the primary tool used for data collection for this study, a response rate of 100 percent was achieved. Data collected from respondents were analysed using SPSS version 27, with results presented in the form of descriptive statistics by means of graphs, cross tabulations and other figures illustrative of the collected quantitative data.

Some inferential statistic techniques, including cross tabulation analysis, chi-square test of relationships and correlation analysis, and more, were employed for the purpose of this study. The literature reviewed prior to this chapter served as a blueprint for this study, providing a broad summary of information pertaining to entrepreneurial financial governance, its effects on organizations, and the role of entrepreneurial financial leadership governance, among others.

5.2 THE SAMPLE

For the purposes of this study, 160 questionnaires were printed and distributed to respondents and all were returned. In achieving a response rate of 100 percent, indicating the level of population representation, which allowed reaching conclusive generalisations.

A total of 172 respondents were surveyed and interviewed, with 160 respondents for the quantitative study and 12 participants in the qualitative study. Furthermore, the 160 respondents for the quantitative study meet the minimum sample adequacy requirement in SEM (Hair *et al*. 2017).The researchers indicated that 100 sample size is sufficient for most applications as long as measurement is good. The Bottom line is that the generalizability necessary in the study is a more determinant criterion for sample size than statistical approach.

5.3 RESEARCH INSTRUMENT

Consisting of 52 items, the research instrument offered several measurement levels, at both the nominal or ordinal level., with the questionnaire consisting of five sections

Section A	Socio-Demographic
Section B	Critical Factors affecting financial governance Strategies
Section C	Entrepreneurial financial governance
Section D	Role of entrepreneurial financial leadership governance
Section E	Effect of Financial governance on Growth of TUs

5.4 RELIABILITY STATISTICS

The two most important precision aspects are considered to be reliability and validity, with several measurements taken on the same subjects to compute reliability. A reliability coefficient of 0.70 or higher is considered as “acceptable”. The table below reflects the Cronbach’s alpha score for all items that constituted the questionnaire

Table 5.1: Reliability scores

	No. of Items	Cronbach's Alpha
Internal factors affecting financial governance	9	0.936
External factors affecting financial governance	10	0.863
Critical Factors Contributing to The Entrepreneurial Financial Governance	6	0.716
Reliability Of Entrepreneurial Financial Governance Strategies	5	0.972
Entrepreneurial Financial Leadership Governance	5	0.857
Role of Entrepreneurial Financial Leadership Governance	5	0.839
Effect of Financial governance on Growth of Technical Universities	5	0.775

A reliability analysis was conducted on all categories of statements in the questionnaire. Questions within the questionnaire were sub-divided into themes, in accordance with the research objectives. The reliability statistics revealed (Table 5.1) all categories of statements surpassed the Cronbach's Alpha value of 0.7, as recommended. This suggests test items used for scoring are reliable and consistent.

Table 5.2: KMO and Bartlett's Test

	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	Bartlett's Test of Sphericity		
		Approx. Chi-Square	df	Sig.
Internal factors affecting financial governance	0.895	747.529	28	0.001
External factors affecting financial governance	0.872	763.452	45	0.001
Critical Factors Contributing to The Entrepreneurial Financial Governance	0.858	418.089	15	0.001
Reliability Of Entrepreneurial Financial Governance Strategies	0.880	499.269	10	0.001
Entrepreneurial Financial Leadership Governance	0.854	448.419	10	0.001
Role of Entrepreneurial Financial Leadership Governance	.834	411.938	10	0.001

Effect of Financial governance on Growth of Technical Universities	0.735	184.789	10	0.001

In order to use PCA or FA for a study, the data must pass a set of criteria, including the KMO Measure of sampling adequacy and Bartlett's Test of Sphericity. As illustrated above (Table 5.2), all question categories acquired a KMO value above 0.5 and a Bartlett's Test of Significance value below an alpha value of 0.05.

5.5 SOCIO-DEMOGRAPHIC CHARACTERISTICS

The first section of the questionnaire explored the demographic characteristics of respondents that participated in the study. The section was made up of seven statements based on gender, age group, years of experience in organization, and educational, as well as professional qualifications, department worked in, and the type of staff.

Table 5.3: Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MALE	100	62.5	62.5	62.5
	FEMALE	60	37.5	37.5	100.0
	Total	160	100.0	100.0	

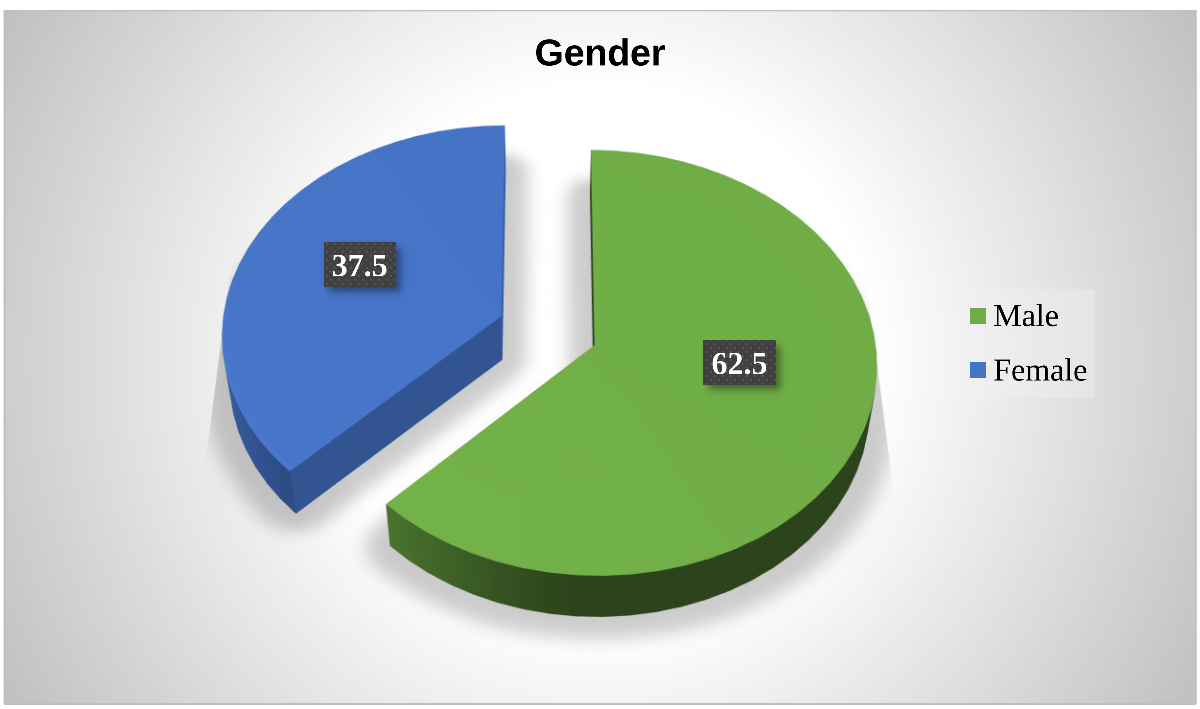

Figure 5.1: Gender

The respondent gender distribution is shown in Table 5.3 and Figure 5.1. It can be observed that more than half the respondents (100 or 62.5 percent) are male, whereas the remaining 60 (37.5 percent) are female. This clearly reveals more male than female respondents.

Table 5.4: Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	UNDER 30 YEARS	13	8.5	8.5	8.5
	31-40 YEARS	46	28.7	28.7	37.2
	41-50 YEARS	63	39.0	39.0	76.2
	OVER 50 YEARS	38	23.8	23.8	100.0
	Total	160	100.0	100.0	

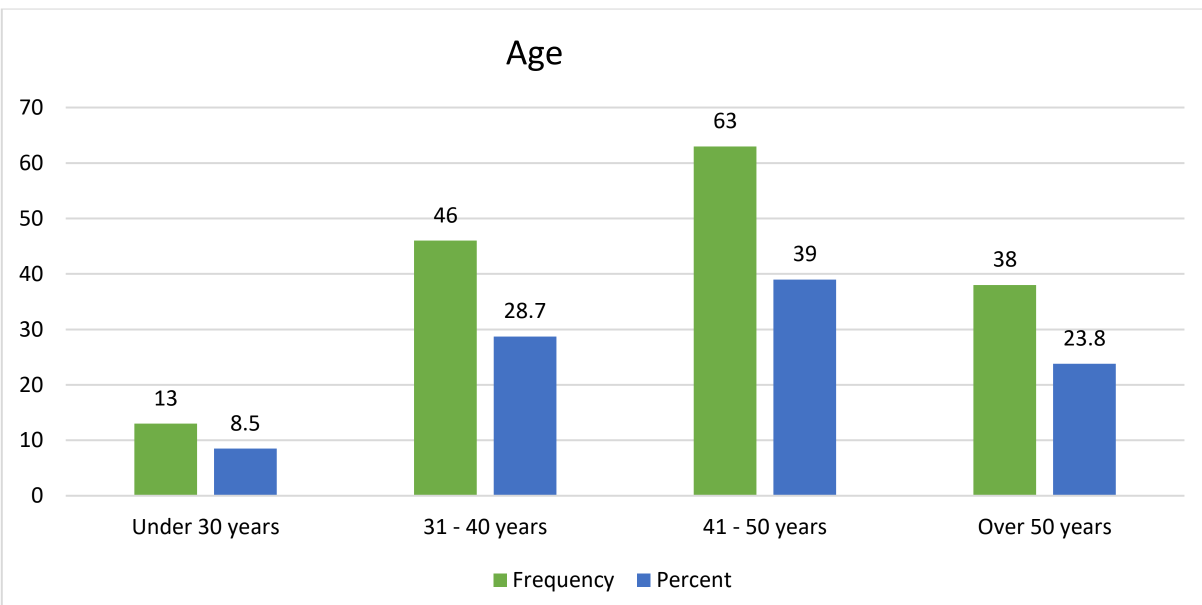

Figure 5.2: Age

Table 5.4 and Figure 5.2 depict the age distribution of respondents in terms of their age groups. The study revealed a moderate number of 63 (39 percent) respondents is between the ages of 41 to 50 years, with 46 respondents representing 28.7 percent between 31 to 40 years. Furthermore, for respondents over 50 years, the study recorded

38 (23.8 percent) respondents with 13 (8.5 percent) respondents under the age of 30.

Table 5.5: How long have you been working for the university?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 5 years	24	15.0	15.0	15.0
	5-10 years	25	15.6	15.6	30.6
	Above 10 Years	111	69.4	69.4	100.0
	Total	160	100.0	100.0	

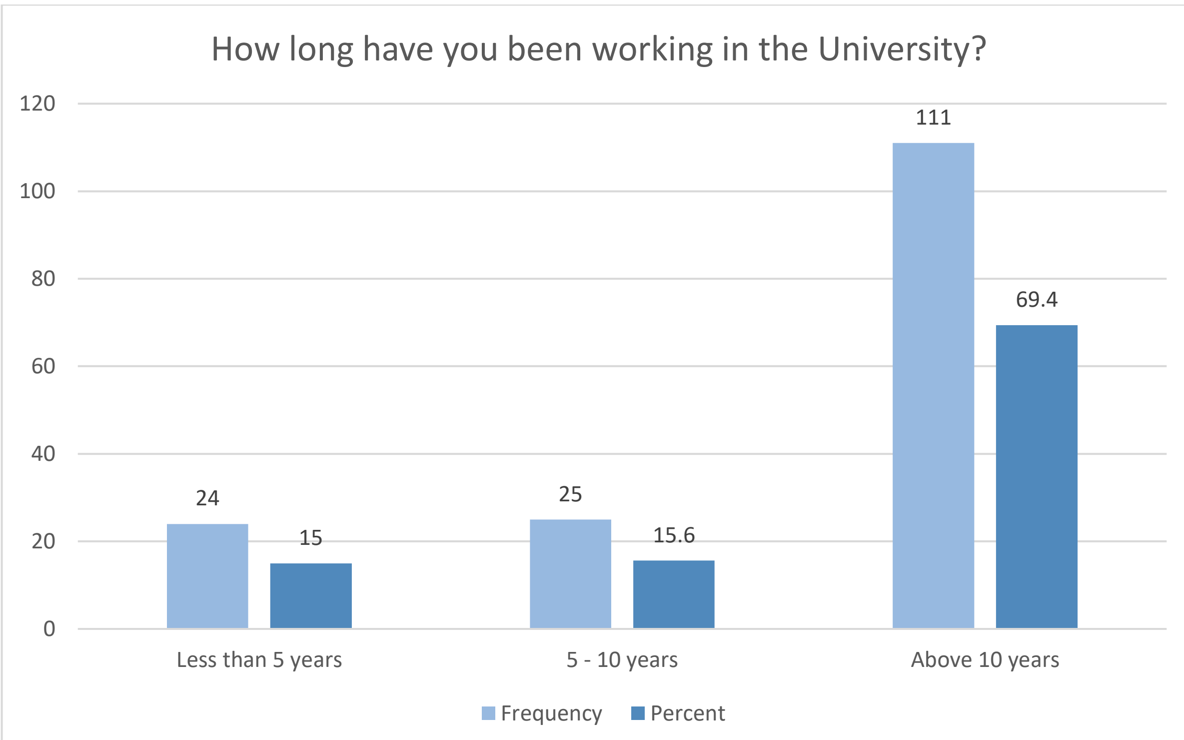

Figure 5.3: How long have you been working in the University?

As indicated in table 5.5 and figure 5.3, more than half the respondents (111 or 68.9 percent) have worked in their various institutions for more than 10 years, 25 (15.6 percent) respondents have been working for between five to 10 years, while the remaining 24 (15 percent) have worked in their respective organizations for less than five years. This reveals that a substantive majority of respondents are well grounded and have built experience, since they have more than 10 years working experience.

This information is quite important, considering the majority respondents, representing

69.4percent, have worked with the TU for the past 10 years and have thus built a repertoire of experience and knowledge that enhances their ability to effectively respond and provide the appropriate information on the issues being investigated.

Table 5.6: Highest Educational Qualification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Undergraduate Degree	21	13.1	13.1	13.1
	Master's Degree	134	83.8	83.8	96.9
	PhD	5	3.1	3.1	100.0
	Total	160	100.0	100.0	

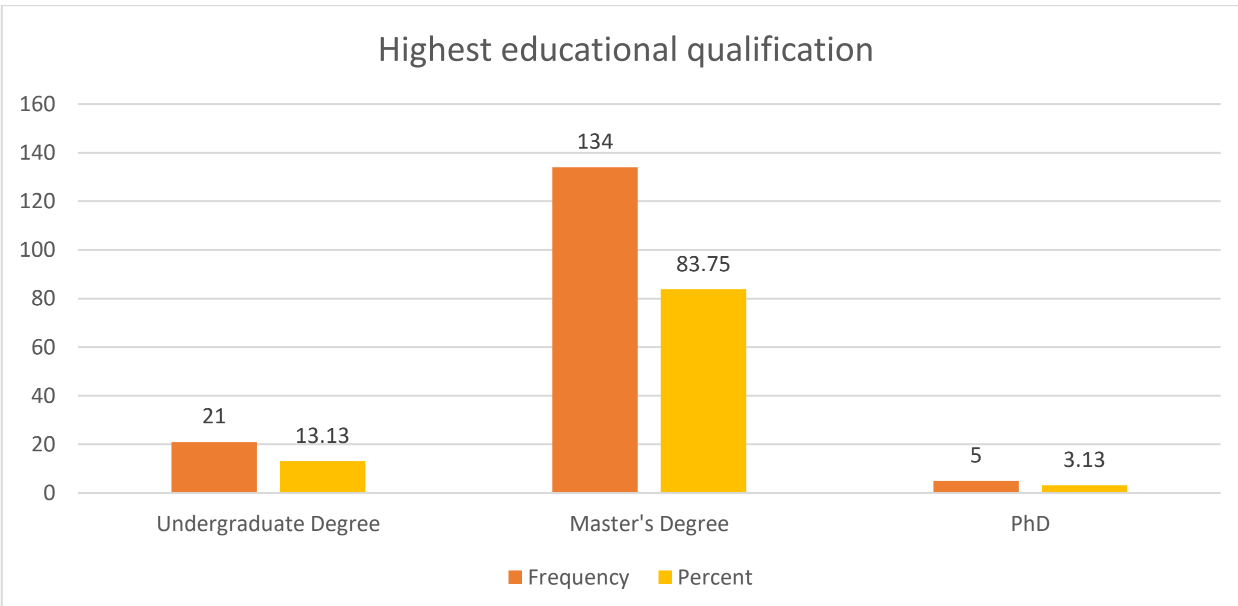

Figure 5.4: Highest educational qualification

Table 5.6 and figure 5.4 illustrate the highest educational qualifications of respondents that participated in the study. It was found the majority respondents (34 or 83.75 percent) attained a Master's degree, while 21 (13.13 percent) have an undergraduate degree. Only a few respondents (five or 3.13 percent) hold a PhD. This suggests all respondents that participated in the study are well-educated and have the know-how to respond to various items in the study.

Table 5.7: Professional Qualification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	CA	38	23.8	23.8	23.8
	CIMA	4	2.5	2.5	26.3
	ACCA	10	6.3	6.3	32.5
	Other	108	67.5	67.5	100.0
	Total	160	100.0	100.0	

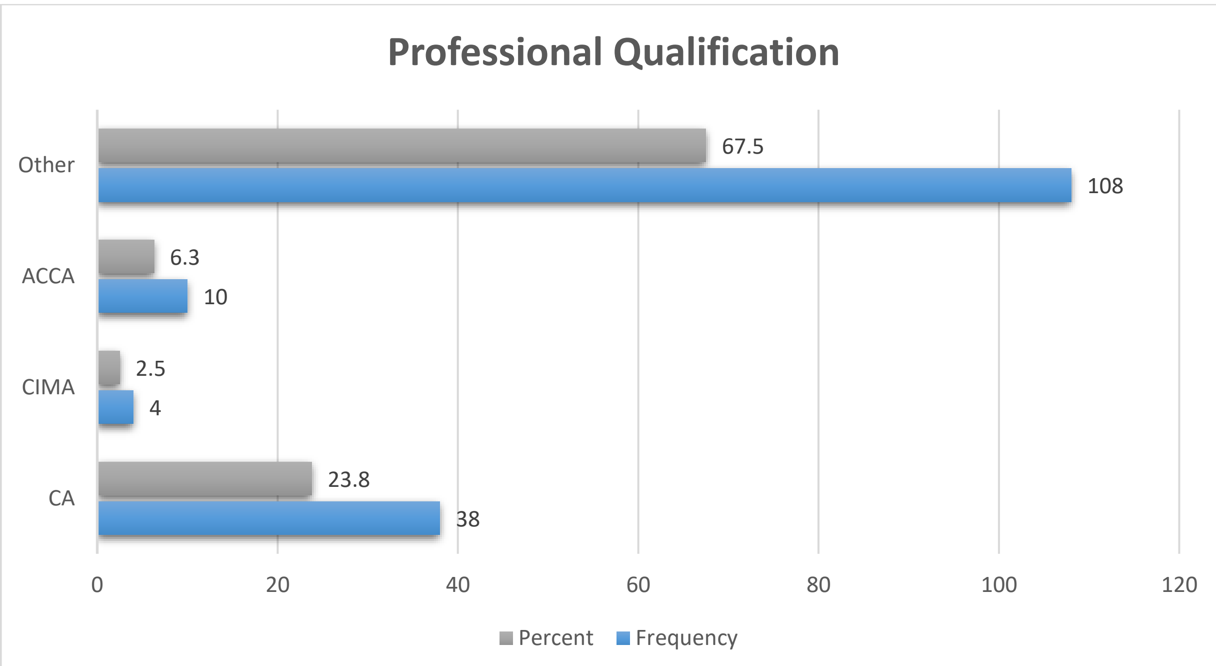

Figure 5.5: Professional Qualification

Table 5.7 and figure 5.5 show a moderate number of respondents (38 or 23.8 percent) had acquired their CA, while 10 (2.5 percent) had a CIMA. Ten (6.3 percent) respondents had an ACCA qualification, while more than half the respondents (108 or 67.5 percent) had professional qualifications other than what was stated in the questionnaire. Some of these include administrative staff.

Table 5.8: Which Department do you belong to?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Finance	48	29.3	29.3	29.3
	Business Development & Innovation	16	9.8	9.8	39.0
	Audit	48	29.3	29.3	68.3
	Administration	52	31.7	31.7	100.0
	Total	160	100.0	100.0	

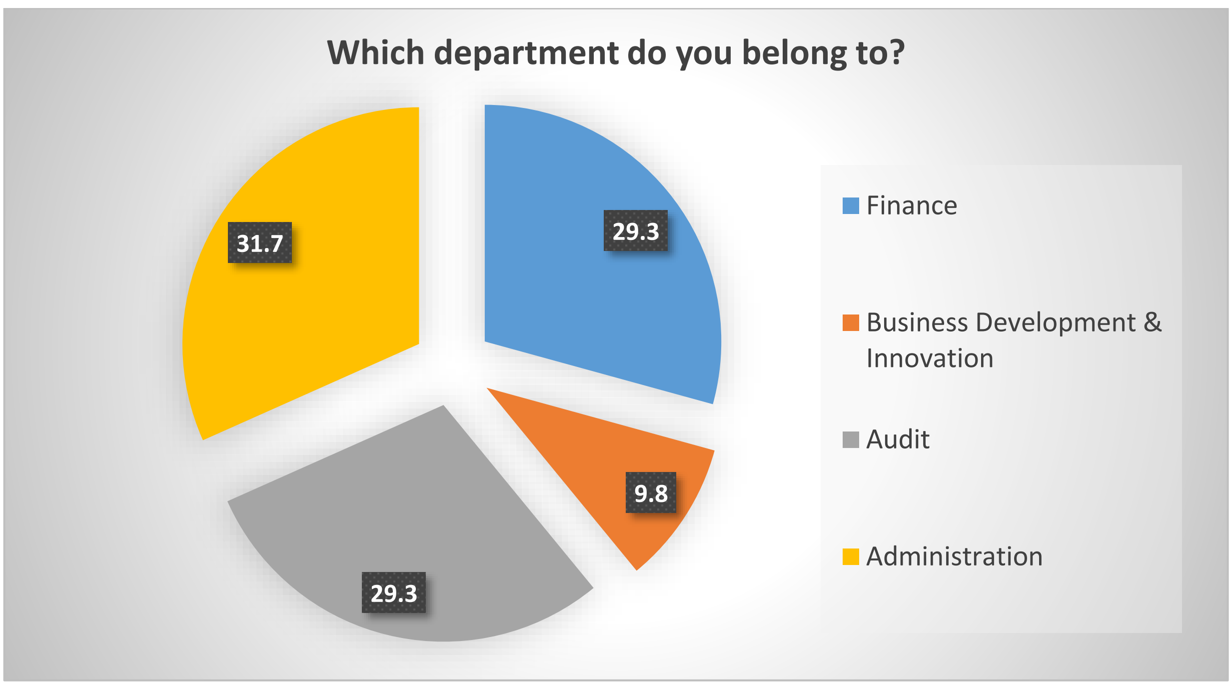

Figure 5.6: Which department do you belong to?

In an effort to discover the expertise and experience of respondents, the offices within which they worked were ascertained. Table 5.8 and figure 5.6 show a moderate number of respondents (52 or 31.7 percent) worked in administration, while 48 (29.3 percent) worked at the finance office. Furthermore, 48 (29.3 percent) respondents worked in Audit, with the remaining 16 (9.8 percent) worked in the Business Development and Innovation offices.

Table 5.9: Which Staff category do you belong to?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Junior staff	1	0.6	0.6	0.6
	Senior staff	33	20.6	20.6	21.3
	Senior Member	126	78.8	78.8	100.0
	Total	160	100.0	100.0	

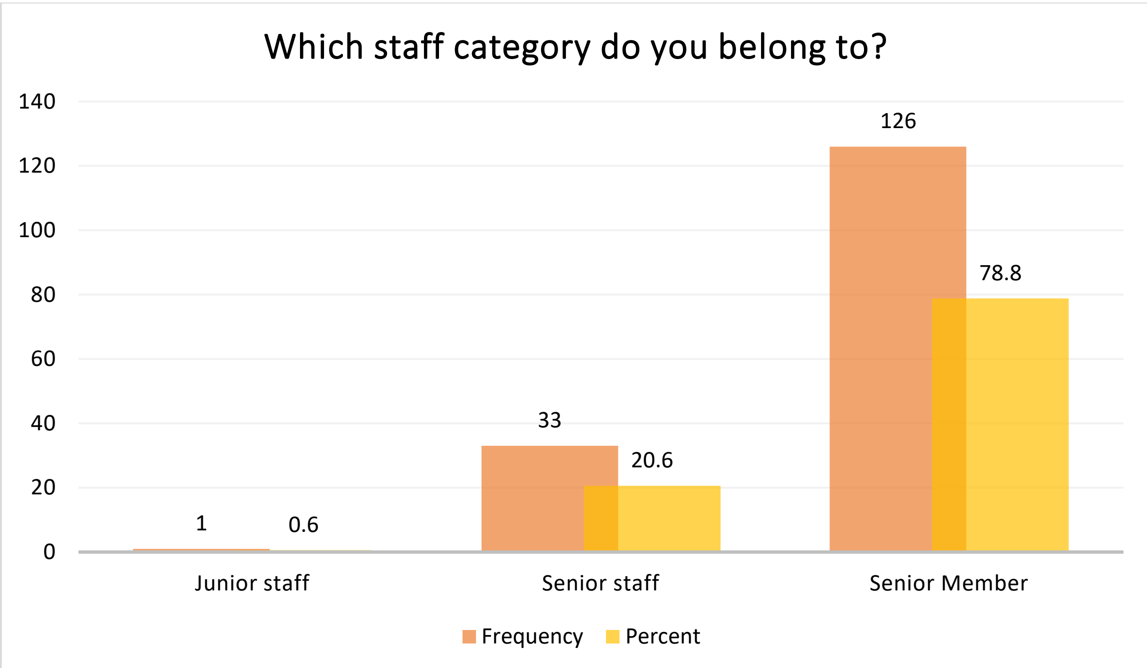

Figure 5.7: Which staff category do you belong to?

The participant staff categories are depicted in Table 5.9 and figure 5.7. It was discovered the majority of respondents (126 or 78.8 percent) are senior members in their respective organizations, while a moderate number of respondents (33 or 20.6 percent) are senior staff with one respondent (0.6 percent) a junior staff member.

5.6 FACTORS AFFECTING FINANCIAL GOVERNANCE: INTERNAL FACTORS

This section has as its main aim the discovery of those salient factors that affect financial governance, which are classified into two broad categories, comprising internal and external factors. The factors considered as internal that affect financial governance were assessed using nine variables, while the external factors were assessed with 10 variables. As indicated above, these factors were identified through a rigorous literature review and were also used in the formation of the aims and objectives of the study, as well as the development of the questionnaire. Hitherto, the factors that affect financial governance were assessed and represented in tables and figures.

Table 5.10: Right Management Competence

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	5.6	5.6	5.6
	Disagree	8	5.0	5.0	10.6
	Neutral	10	6.3	6.3	16.9
	Agree	62	38.8	38.8	55.6
	Strongly Agree	71	44.4	44.4	100.0
	Total	160	100.0	100.0	

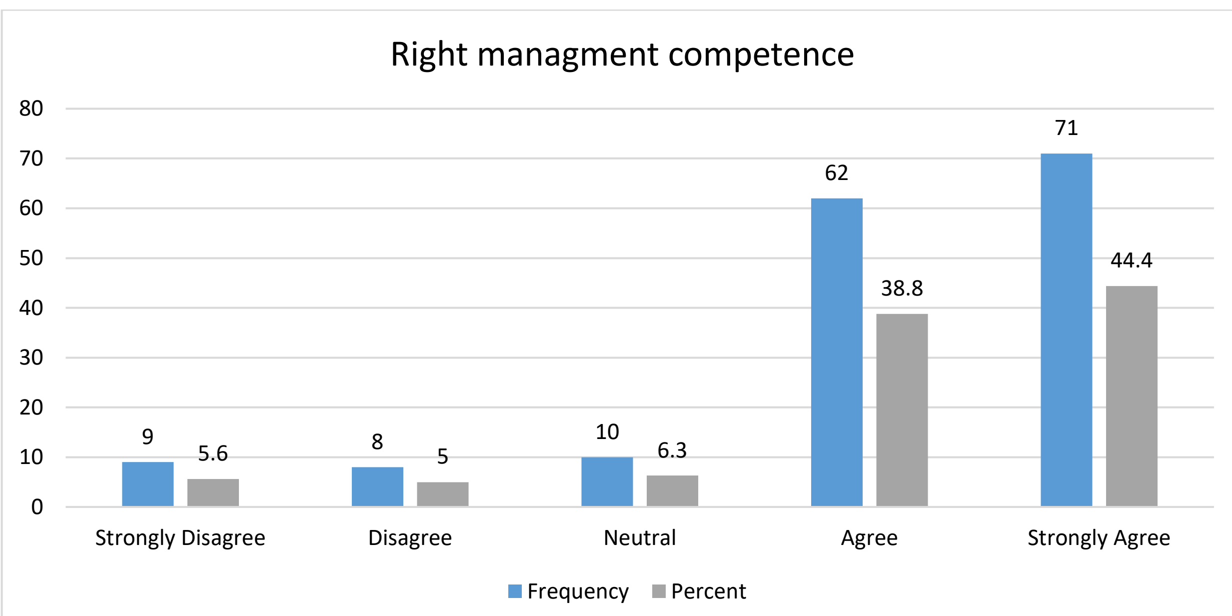

Figure 5.8: Right management competence

As indicated by table 5.10 and figure 5.8, cumulatively, the majority respondents strongly agreed and agreed on the issue of right management competence. Therefore, 71 (44.4 percent) respondents strongly agreed right management competence affects financial governance. Furthermore, 62 (38.8 percent) respondents agreed to the claim. Although 10 (6.3 percent) respondents remained neutral, nine (5.6 percent) and eight (five percent) strongly disagreed and disagreed, respectively, having the right and competent people in authority does affect financial governance. These results indicated (X^2= 34.385; df = 16; P = 0,005) for this variable, showing a significant relationship between Right Management Competence and Financial Governance of the TUs in Ghana. Management competencies, as confirmed by Lopa and Bose (2014: 11), impact the firm's long-term performance. Furthermore, Veliu and Manzhari (2017: 64) later determined linkages between various independent managerial competencies were positively significant for business performance. In other words, management competence is fundamental to financial governance (Yahya and Elsayed 2012: 132) and it is important for the TU managers to understand that when the business environment changes, the competencies required are liable to change as well (Taipale-Erävala 2015: 20). This implies TU management needs to identify the competencies that will enable them to achieve effective financial governance objectives. Therefore, the TUs need to be aware of the significance of management competencies as contributors to financial growth and success, and to understand the nature, role and impact such competencies will have on innovation and sustainable growth (Sánchez 2011: 241).

Table 5.11: Ineffective Internal Auditing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	19	11.9	11.9	11.9
	Disagree	37	23.1	23.1	35.0
	Neutral	17	10.6	10.6	45.6
	Agree	45	28.1	28.1	73.8
	Strongly Agree	42	26.3	26.3	100.0
	Total	160	100.0	100.0	

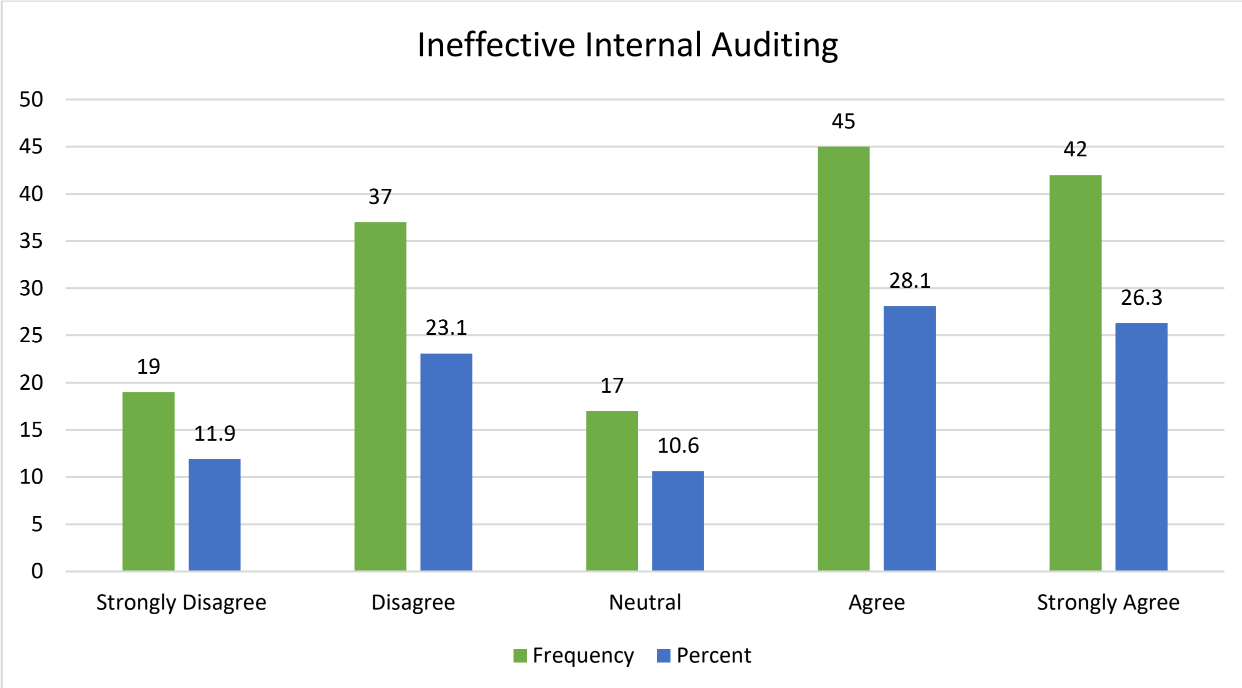

Figure 5.9: Ineffective Internal Auditing

Table 5.11 and figure 5.9 show the responses regarding whether ineffective internal auditing affects financial governance. A moderate number of respondents (45 or 28.1 percent) agreed with the claim, while 42 (26.3 percent) strongly disagreed when internal auditing within an organization is done in an ineffective manner it affects financial governance. Analysis revealed 17 (10.6 percent) respondents remained neutral, 37 (23.1 percent) disagreed and 19 (11.9 percent) strongly disagreed, indicating the Ineffectiveness of Internal Auditing processes can by no means affect financial governance. A chi-square analysis between Ineffective Internal Auditing and Financial Governance (X^2= 40.754; df = 16; P = 0.001) indicates a significant relationship between ineffective internal auditing and the financial governance of the organization.

In other words, when internal auditing processes are not performed in an ineffective manner, it will eventually lead to bad financial governance of the organization. Internal audit is critical to the attainment of objectives as one of the internal control components in organizations (Wallek 2016). Nevertheless, the various stakeholder expectations regarding IA roles and responsibilities in preventing fraud cases and embezzlement of funds, have brought about an expectation gap, due to insufficient staff independence and competence.

There must be no interference in the IA department in determining the scope of work, performing of tasks, and reporting results (IIA 2016). With the institution of IA Units in the TUs in Ghana, it is expected organizational efficiency will be enhanced with less scandals, misappropriation of public funds, bribery and corruption. However, financial irregularities in the TUs continue at an alarming rate. As revealed by the 2020 AG Report on the accounts of the TUs in Ghana, financial irregularities and financial infractions, including fraud cases, there was an increase of "60 percent in 2017, 17 percent in 2018, 73 percent in 2019 and 82 percent in 2020" (AG 2020: 3). This clearly indicates impaired IA independence at the TUs affecting their ability to perform their expected independent responsibilities. Numerous studies have, nevertheless, indicated the IA roles have expanded, specifically in the public sector, in both significance and scope (Abbey 2010; Gros *et al.* 2016; Spira & Page 2003).

Table 5.12: Lack of Financial Management Skills		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	16	10.0	9.8	10.0
	Disagree	30	18.8	18.3	28.8
	Neutral	17	10.6	10.4	39.4
	Agree	47	29.4	28.7	68.8
	Strongly Agree	50	31.3	32.9	100.0
	Total	160	100.0	100.0	

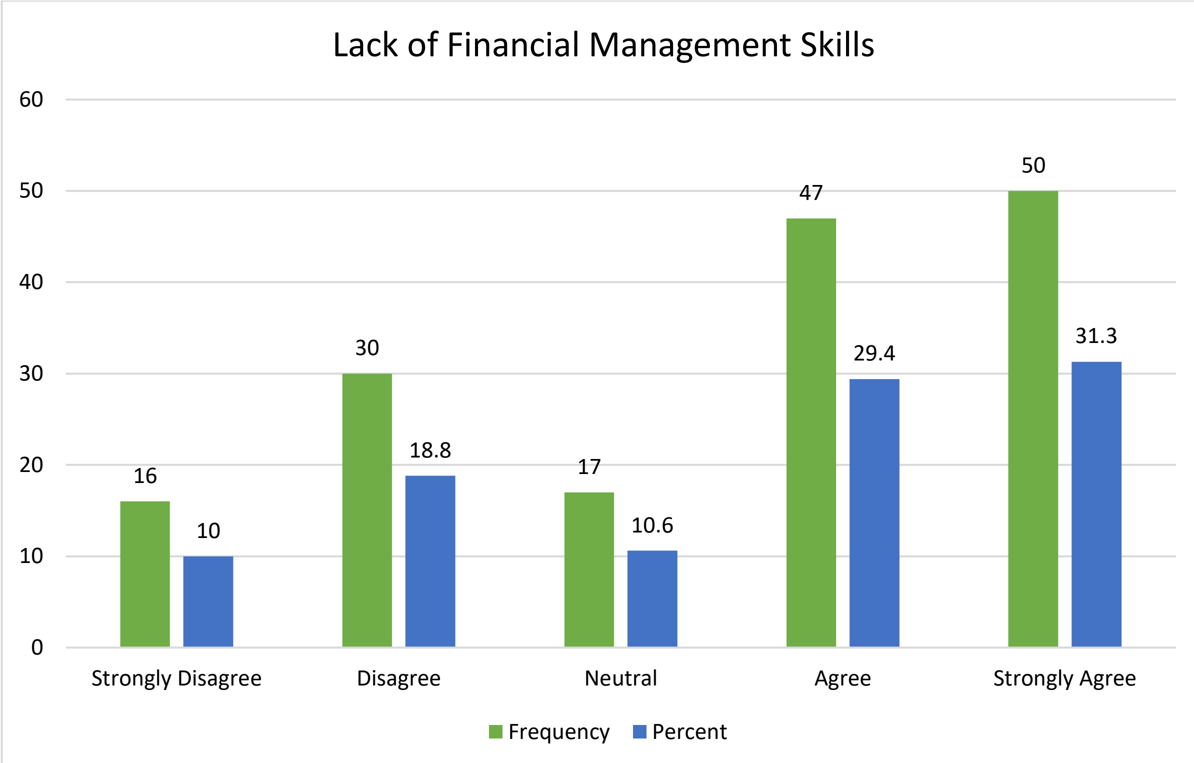

Figure 5.10: Lack of Financial Management Skills

As depicted in table 5.12 and figure 5.10, a moderate number of respondents (50 or 31.3 percent) strongly agreed the lack of financial management skill has no influence on financial governance. The study similarly revealed 47 (29.4 percent) respondents also agreed, while 17 (10.6 percent) respondents remained neutral. However, 30 (18.8 percent) disagreed the lack of financial management skills could affect financial management, while 16 (10 percent) strongly disagreed. Effectively, this insinuates more than half the respondents are of the view the lack of financial management skills affects financial governance.

These results indicated (X^2= 57.972; df = 16; P = 0.001) for this variable, reflecting a positive and significant relationship exists between financial management skills and the financial governance of the organization. In other words, when there is a lack of financial management skill set within the organization, it has an effect on the financial governance of the organization.

Syed Kutnjak *et al*. (2019) clarified the composition of financial reporting skills as comprising the energies, skills, talents, and knowledge of people, in ensuring an organization is financially responsible to its stakeholders. Ismael *et al*. (2021) concur the right people, with the necessary skill set, need to be matched with the right position, as this is one of the determinants of system effectiveness.

Although management uses business techniques to deliver added value in order to gain a competitive advantage (Gardi 2021), Sorguli and Al-Kake (2020) argue universities should be committed to the proper management of their human capital, so they may achieve their financial objectives and goals, thereby increasing the efficacy of their financial governance system.

Table 5.13: Inadequate Professional Capacity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	11	6.9	6.9	6.9
	Disagree	31	19.4	19.4	26.3
	Neutral	20	12.5	12.5	38.8
	Agree	52	32.5	32.5	71.3
	Strongly Agree	46	28.8	28.8	100.0
	Total	160	100.0	100.0	

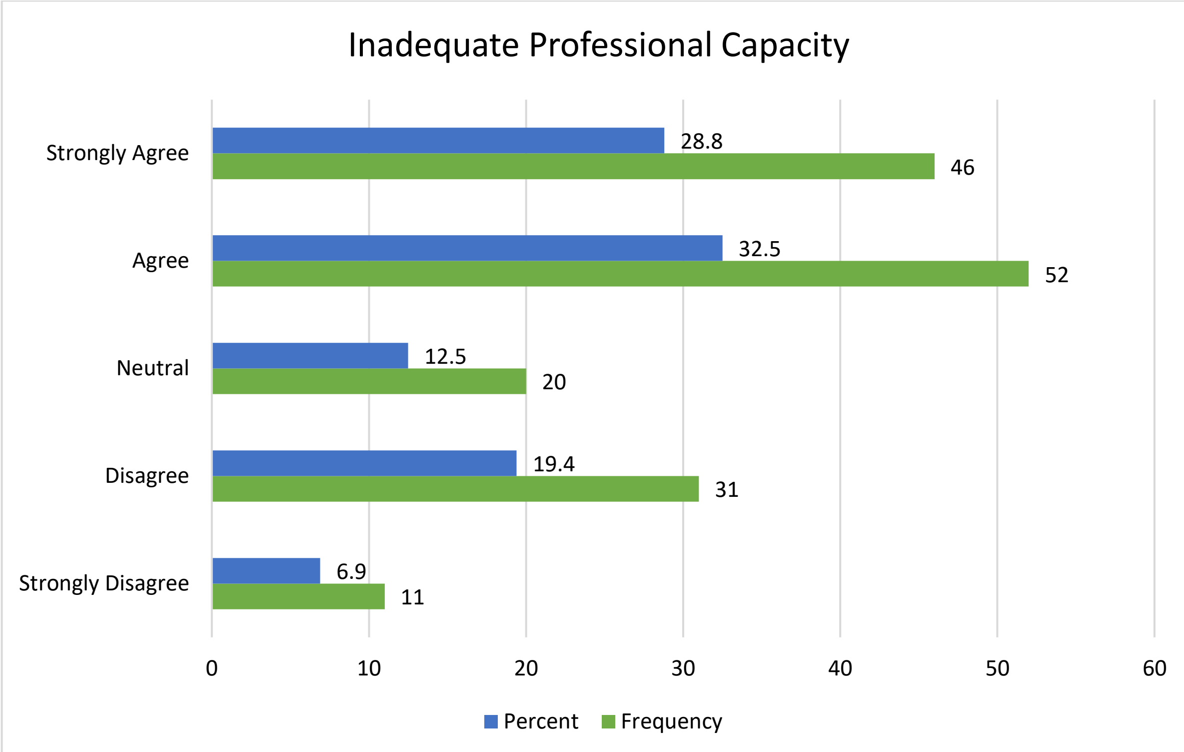

Figure 5.11: Inadequate Professional Capacity

Table 5.13 and figure 5.11 show a moderate number of respondents 52 (32.5 percent) agreed the inadequacy of professional capacity can affect financial governance. A further 46 (28.8 percent) respondents strongly agreed, however, a small number of respondents (20 or 12.5 percent) were neutral, while disagreement was indicated by 31 (19.4 percent) and 11 (6.9 percent) strongly disagreed that inadequate professional capacity can affect financial governance. These results indicated (X^2= 39.885; df = 16; P = 0.001) for this variable, which shows when firms do not have adequate professional capacity, it has an effect on their financial governance and growth.

The term “professional proficiency” is explained by the international standards of professional practice of the IPPF (IIA 2016), as the professional competencies, such as knowledge, skills and others, which auditors and accountants require to effectively perform their responsibilities (IIA 2016). It is said the experience of audit and finance staff has a significant impact on the quality and their role (AlTwairy *et al.* 2003; Vu 2016; Yu *et al*. 2019). A poor financial governance system is the consequence of the lack of quality HR, finance capacity, and knowledge of suitable technology (De Mauro *et al.* 2018).

In most organizations' annual reports, the remark "our greatest assets are our employees" is, therefore, included (Saleh *et al*. 2021). Although management uses business techniques to deliver added value in order to gain a competitive advantage (Gardi 2021), Sorguli and Al-Kake (2020) argue universities should be committed to the proper management of their human capital, so they may achieve their financial objectives and goals, thereby increasing the efficacy of their financial governance system.

Table 5.14: Lack of Innovation and Learning

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	10	6.3	6.3	6.3
	Disagree	30	18.8	18.8	25.0
	Neutral	24	15.0	15.0	40.0
	Agree	55	34.4	34.4	74.4
	Strongly Agree	41	25.6	25.6	100.0
	Total	160	100.0	100.0	

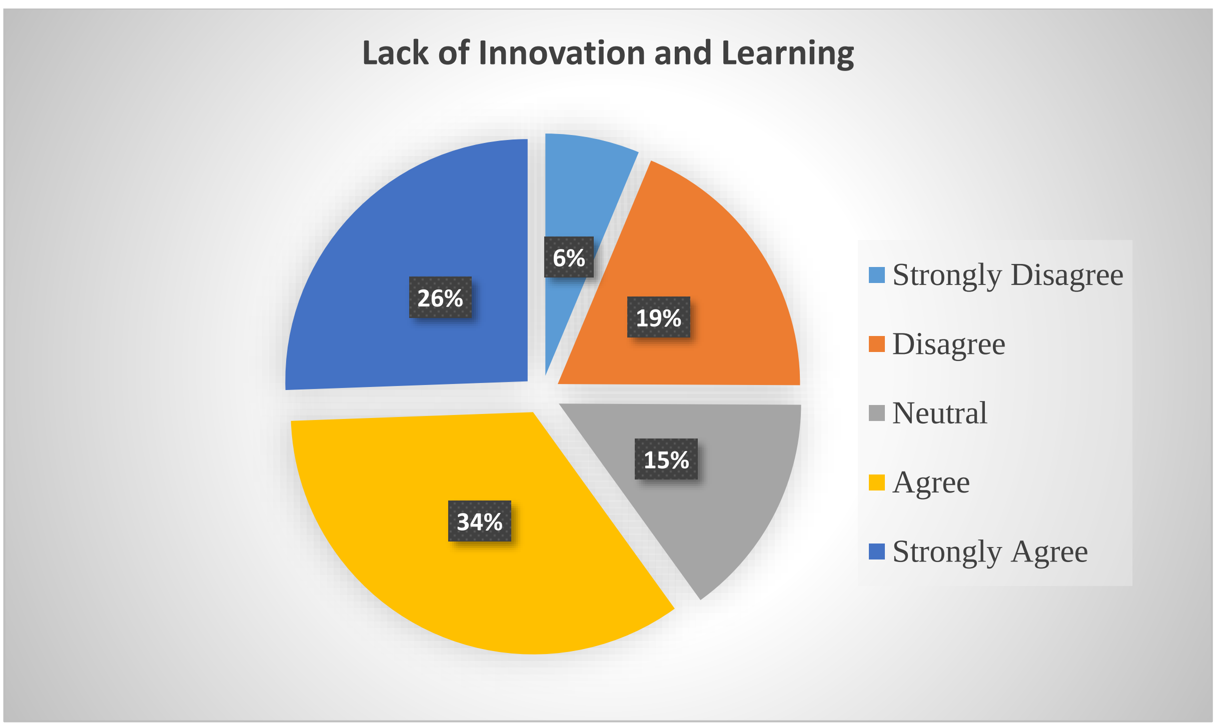

Figure 5.12: Lack of Innovation and Learning

It was incumbent on researchers to determine whether the lack of innovation and continuous learning can be a critical factor affecting financial governance. Table 5.14 and figure 5.12 show a moderate number of respondents (55 or 34.4 percent) agreed, with 41 (25.6 percent) respondents strongly agreeing that lack of innovation and learning in organizations has the tendency to affect financial governance. Furthermore, 24 (15 percent) remained neutral, 30 (18.8 percent) and 10 (6.3 percent) respectively indicated disagreement and strong disagreement, regarding the inability of lack of innovation and learning to affect financial governance in an organization. These results indicated (X^2= 56.360; df = 16; P = 0,005) for this variable, which shows when there is no innovation and learning within the organization, it has a dire effect on the institution's financial governance and growth.

According to Camilleri (2021), the development of sustainable professionalism and innovation is described through organizational capacity. Institutions of higher learning such as the TUs, need employees who can think independently, be creative, innovative and who are willing to learn (Ortiz *et al*. 2019). Furthermore, according to Aly and Mansour (2017), a relationship exists between innovation and learning and continuous improvement and the creation of value.

Table 5.15: Lack of Technological Skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	5.0	5.0	5.0
	Disagree	24	15.0	15.0	20.0
	Neutral	26	16.3	16.3	36.3
	Agree	57	35.6	35.6	71.9
	Strongly Agree	45	28.1	28.1	100.0
	Total	160	100.0	100.0	

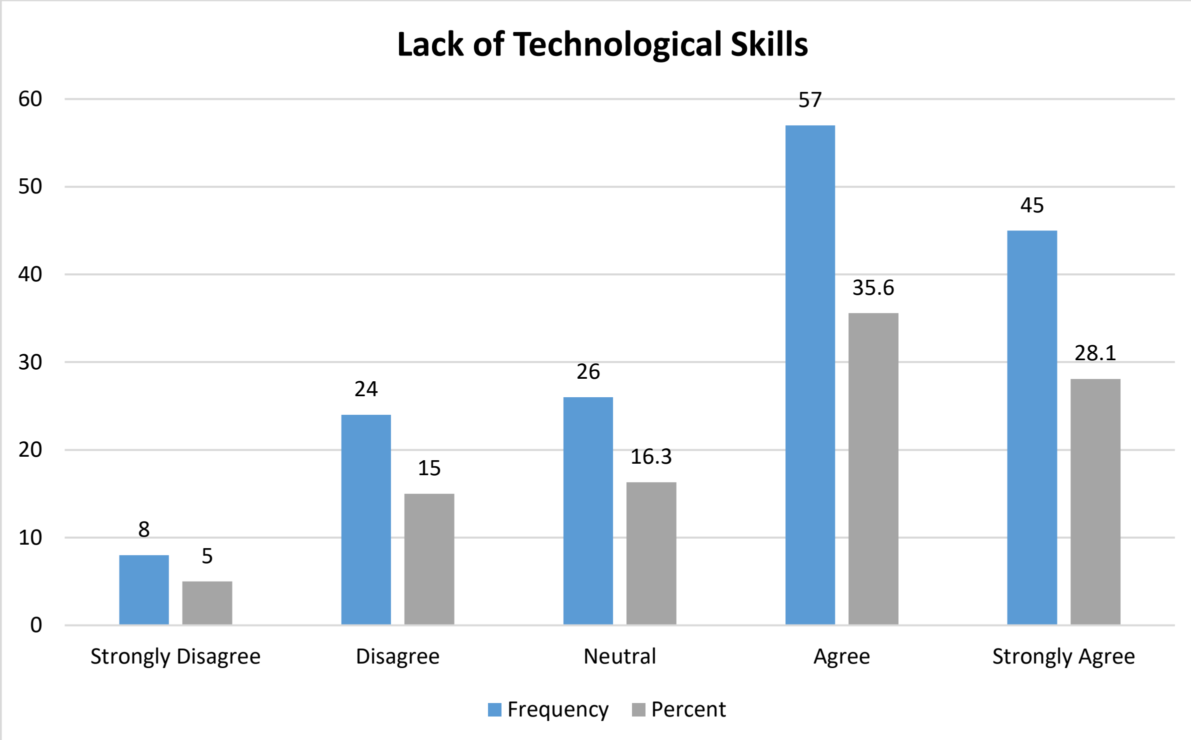

Figure 5.13: Lack of Technological Skills

Table 5.15 and figure 5.13 indicate 57 (35.6 percent) respondents agreed the lack of technological knowhow can have dire consequences on the financial governance of an organization, likewise, 45 (28.1 percent) respondents strongly agreed with the assertion. A further 26 (16.3 percent) respondents disagreed and eight (five percent) strongly disagreed financial governance cannot be impacted by insufficient technological skill. However, there was a smaller respondent number (24 or 15 percent), that remained neutral. These results indicated (X^2= 46.529; df = 16; P = 0.001) for this variable, which shows a significant relationship between technological skills and the financial governance of the organization. Therefore, when the organization lacks the skills and resources with respect to technology, it affects growth and financial governance.

The foundation of any sound financial reporting is to harness the power of technology to work more quickly, accurately and efficiently. Technical skills are explained by Sutevski (2019), to not only be related to proficiency in the use of machines, IT, production tools and various business equipment. In addition, these skills are also critically in designing strategic business approaches, managing business books by means of various accounting software, and designing different product types. Insufficient technical skills will impact the ability by TUs in co-ordinating and managing critical business books and financial reporting.

The inability to use technology has impeded the financial reporting skills of most public sector workers in TUs in Ghana.

Table 5.16: Financial Irregularities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	11	6.9	6.9	6.9
	Disagree	24	15.0	15.0	21.9
	Neutral	19	11.9	11.9	33.8
	Agree	51	31.9	31.9	65.6
	Strongly Agree	55	34.4	34.4	100.0
	Total	160	100.0	100.0	

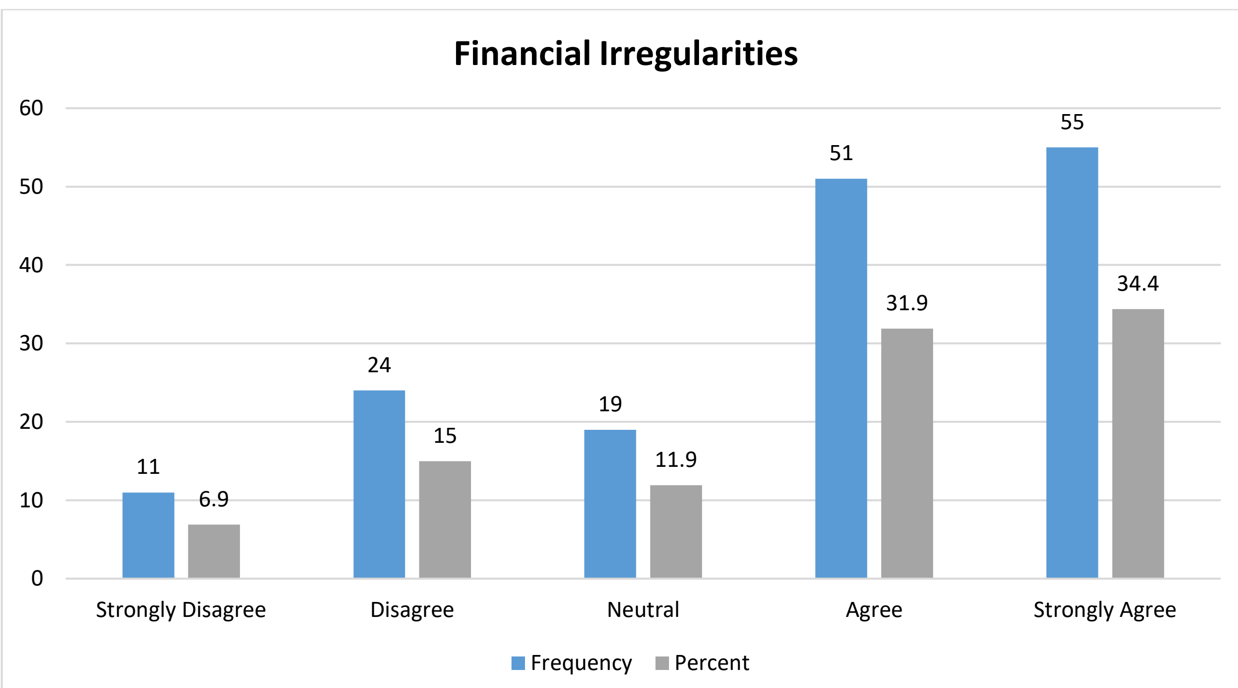

Figure 5.14: Financial Irregularities

Table 5.16 and figure 5.14 illustrate a considerable number of respondents collectively agreed and strongly disagreed financial irregularities impact financial governance; 55

(34.4 percent) respondents strongly agreed and 51 (31.9 percent) agreed when there are financial irregularities within an organization, it has a strong influence on financial governance. A small number of respondents (19 or 11.9 percent) preferred to stay neutral, while 24 (15 percent) disagreed and 11 (6.9 percent) strongly disagreed financial irregularities are a contributing factor to bad financial governance. These results indicated (X^2= 41.280; df = 16; P = 0.001) for this variable, which shows a significant relationship between financial irregularities and the financial governance of TUs in Ghana.

As revealed by the 2020 AG Report on the accounts of TUs in Ghana, there has been an escalation of financial irregularities and financial infractions, which includes fraud cases, by “60 percent in 2017, 17 percent in 2018, 73 percent in 2019, and 82 percent in 2020” (AG 2020: 3).

Table 5.17: Ineffective Internal Controls

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	13	8.1	8.1	8.1
	Disagree	30	18.8	18.8	26.9
	Neutral	14	8.8	8.8	35.6
	Agree	53	33.1	33.1	68.8
	Strongly Agree	50	31.3	31.3	100.0
	Total	160	100.0	100.0	

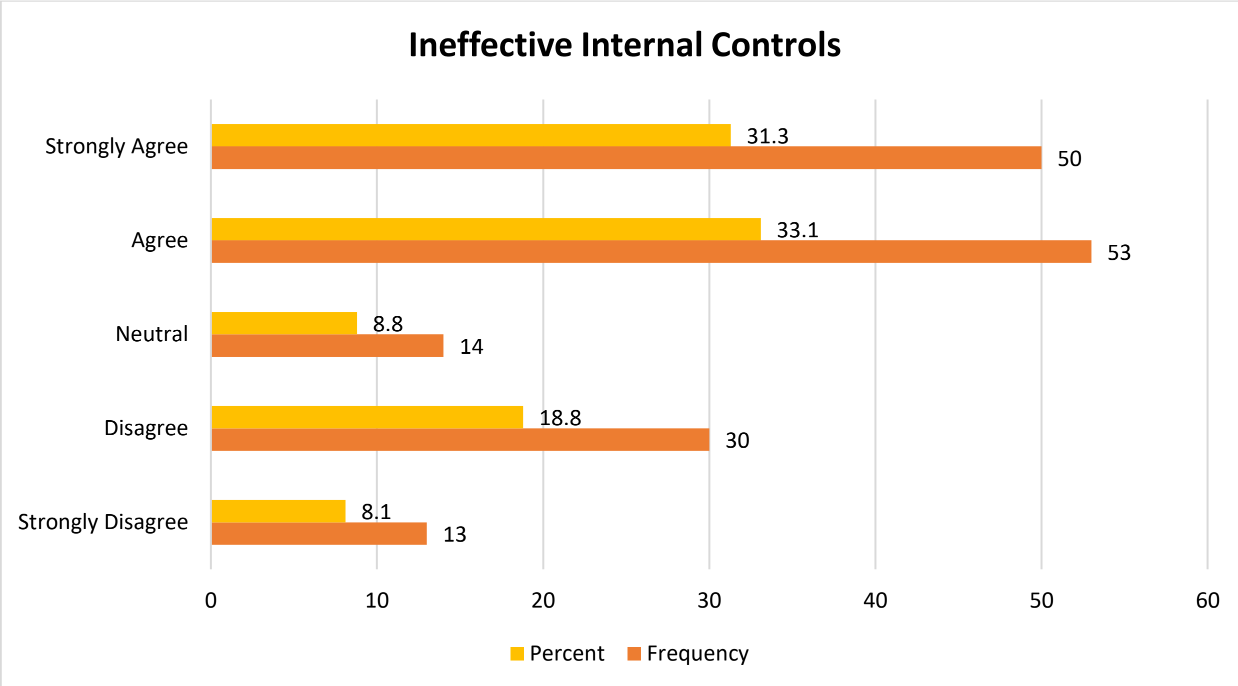

Figure 5.15: Ineffective Internal Controls

Table 5.17 and figure 5.15 show the views of respondents on whether the ineffective internal control systems and practices of organizations can affect their financial governance. Analysis reflects a considerable number of respondents collectively agreed and strongly disagreed ineffective internal control systems and mechanisms in an organization impact financial governance. This is shown by 53 (33.1 percent) respondents that agreed and 50 (31.3 percent) that strongly agreed when there is an ineffective internal control system, it affects financial governance. With 14 (8.8 percent) respondents indicating neutral, a further 30 (18.8 percent) disagreed and 13 (8.1 percent) strongly disagreed. These results indicated (X^2= 37.110; df = 16; P = 0.002) for this variable, reflecting a significant relationship between ineffective internal controls and the financial governance of the TUs.

Inefficient Internal Controls are confirmed by Aslam and Haron (2020), Ghadamyari and Abadi (2020) and Warrad and Khaddam (2020) to leave firms vulnerable to risks, which includes accounting transactions that are improperly recorded, along with losses, as well as risks associated with uncertainty. Internal controls systems are critical to financial governance strategies of TUs in Ghana to ensure accountability is affected and there is transparency in the way they go about their activities. TUs will, as a result of effective control policies, introduce values through innovations, entrepreneurialism, exploration, as well as advancement, in addition to offering openness and answerability in their actions (Abdelkarim & Zuriqi 2020; Aluchna & Kuszewski 2020; Saleh *et al*. 2020).

Component matrix: Critical factors affecting Financial Governance

Table 5.18: Component Matrix[a]

	Component
	1
Lack of financial management skills	.879
Inadequate Professional Capacity	.817
Lack of Innovation and Learning	.887
Lack of Technology Skills	.806
Financial Irregularities	.828
Ineffective Internal Controls	.817

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

These components are a further statistical test performed on the above-mentioned figures (Figure 5.8 – 5.14). analysis of respondents' responses revealed that variables under the factors affecting financial governance loaded strongly on just one component indicating a very strong significance. A component test was performed on the statement regarding whether the lack of financial management skills could affect financial governance, and a strong positive significance of 0.879 was determined. Also, a strong and positive significance of 0.887 was obtained for the statement on the lack of innovation and learning. For the significance of financial irregularities and its effect on financial governance, a value of 0.828 was obtained. A figure of 0.817 was obtained for the statements on inadequate professional capacity and the ineffectiveness of internal controls affecting financial governance. Most variables tested regarding internal factors reflected a strong significance towards affecting financial governance. This indicates respondents strongly believed effective internal control systems and mechanisms, proper financial management skills, including innovation and learning, among others, do influence the financial governance of an organization.

5.7 CRITICAL FACTORS AFFECTING FINANCIAL GOVERNANCE: EXTERNAL FACTORS

Table 5.19: Political Factors

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	17	10.6	10.6	10.6
	Disagree	15	9.4	9.4	20.0
	Neutral	19	11.9	11.9	31.9
	Agree	53	33.1	33.1	65.0
	Strongly Agree	56	35.0	35.0	100.0
	Total	160	100.0	100.0	

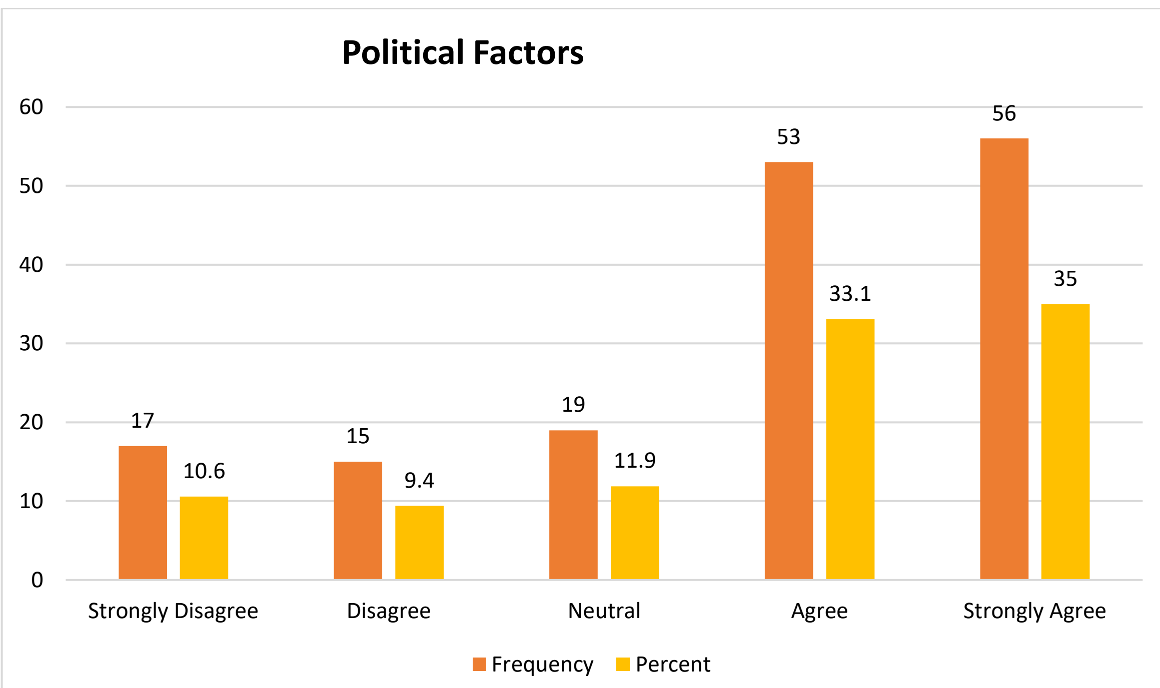

Figure 5.16: Political Factors

As shown in table 5.19 and figure 5.16, there were 56 (35 percent) respondents that strongly agreed external political factors have dire consequences on the financial governance of an organization, likewise, 53 (33.1 percent) agreed with the assertion of political influences of an organization. Furthermore, 17 (10.6 percent) respondents strongly disagreed and 15 (9.4 percent) disagreed external political influences cannot affect the financial governance of an institution, while a smaller number of respondents (19 or 11.9 percent) remained neutral. The results show the majority respondents believe external political influence affects the financial governance of an institution. The results indicated ($X2= 50.878$; $df = 16$; $P = 0.001$) for this variable, reflecting a significant relationship between external political influence and the financial governance of the TUs. In other words, when there are high rates of external political influence on the organization, these affect TU growth and financial governance.

Indris and Primiana (2015) posit stability of the political situation influences a company's choice of where and how they will compete in the market. TUs, therefore, need to take cognisance of political trends, as changes in policies can affect the legal framework within which the universities operate. As Ingram *et al.* (2017) stated, political uncertainty in any form has an effect on market conditions, which influences the amount of assistance and support that can be offered to TUs by the government (Stimpson and Smith 2015: 71**)**.

Table 5.20: Economic Factors

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	5.0	5.0	5.0
	Disagree	19	11.9	11.9	16.9
	Neutral	19	11.9	11.9	28.8
	Agree	60	37.5	37.5	66.3
	Strongly Agree	54	33.8	33.8	100.0
	Total	160	100.0	100.0	

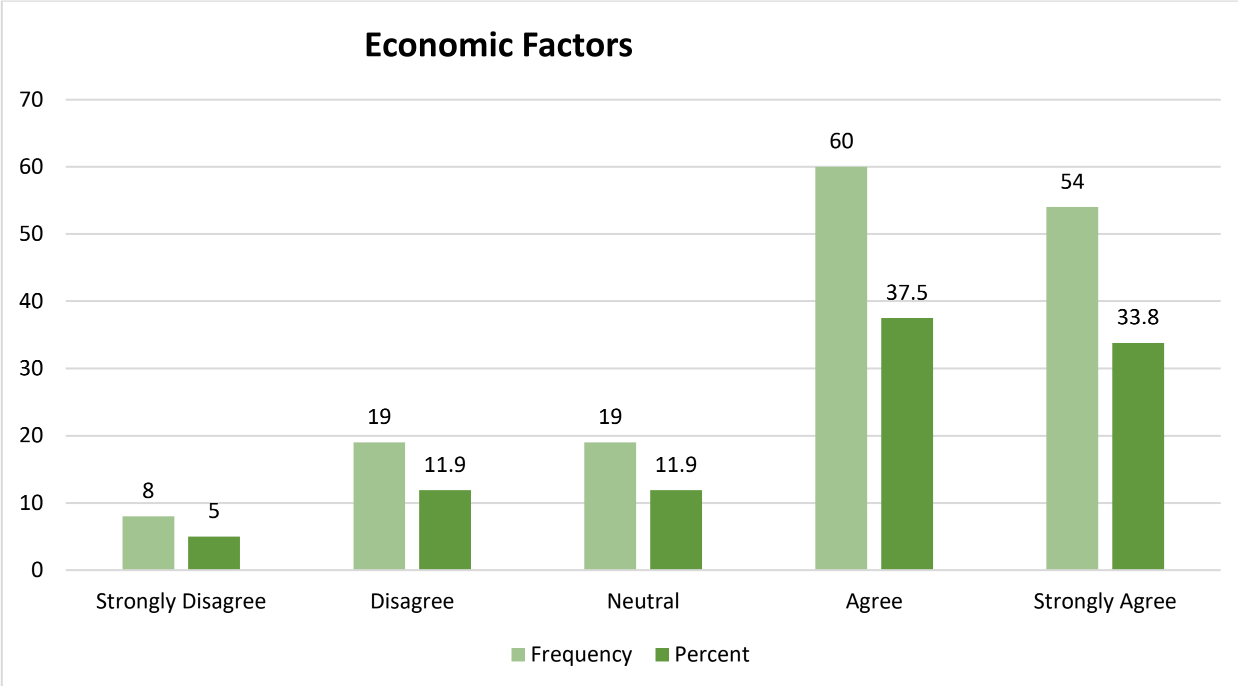

Figure 5.17: Economic Factors

Table 5.20 and figure 5.17 show responses regarding whether economic factors affect financial governance. The study showed a third of the respondents (60 or 37.5 percent) agreed economic factors can affect financial governance. In addition, 54 (33.8 percent) respondents strongly agreed, while a small number (19 or 11.9 percent) were neutral, 19 (11.9 percent) disagreed, and eight (five percent) strongly disagreed external factors can affect financial governance. The results indicated (X2= 43.578; df = 16; P = 0.001) for this variable, which shows an association between economic factors and TU financial governance. This confirms the contention Akbar (2017), Apriliana and Augustina (2017) and Irwandi *et al*. (2019) put forward, of the belief financial stability has a potentially positive effect on financial governance strategies.

Table 5.21: Limit of State Regulations.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	5.6	5.6	5.6
	Disagree	27	16.9	16.9	22.5
	Neutral	21	13.1	13.1	35.6
	Agree	49	30.6	30.6	66.3

	Strongly Agree	54	33.8	33.8	100.0
	Total	160	100.0	100.0	

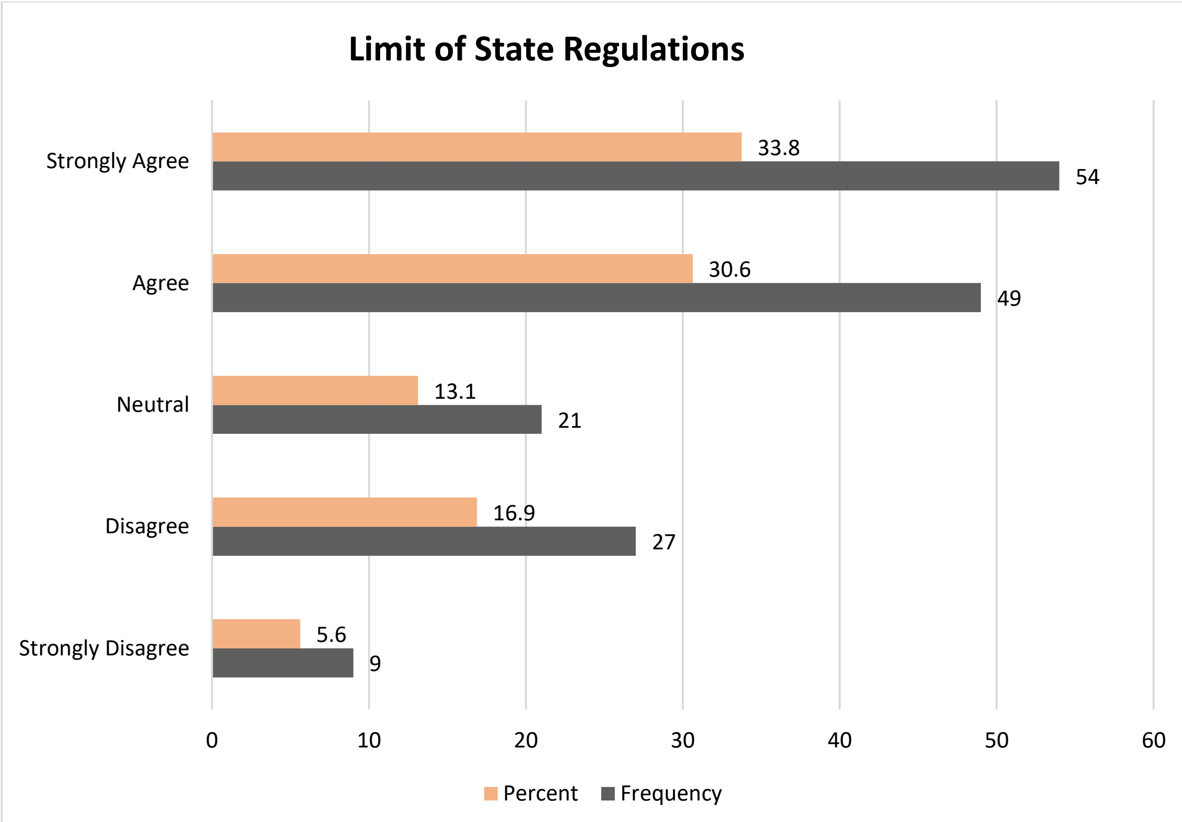

Figure 5.18: Limit of State Regulations

Table 5.21 and figure 5.18 depict the responses on whether the limit of state regulations can affect financial governance. Results show a significant number of respondents believed the limit of state regulations does affect financial governance. This is represented by 54 (33.8 percent) respondents that strongly agreed and 49 (30.6 percent) that agreed with the claim, while 21 (13.1 percent) remained neutral, 27 (16.9 percent) disagreed the limit of state regulations cannot affect financial governance and nine (5.6 percent) strongly disagreed. The results indicated (X2= 42.517; df = 16; P = 0.001) for this variable, showing a significant relationship exists between limit of state regulations and the financial governance of the TUs.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	2.4	2.7	2.7
	Disagree	22	13.4	15.1	17.8
	Neutral	16	9.8	11.0	28.8
	Agree	56	34.1	38.4	67.1
	Strongly agree	48	29.3	32.9	100.0
	Total	146	89.0	100.0	
Missing	System	14	11.0		
Total		160	100.0		

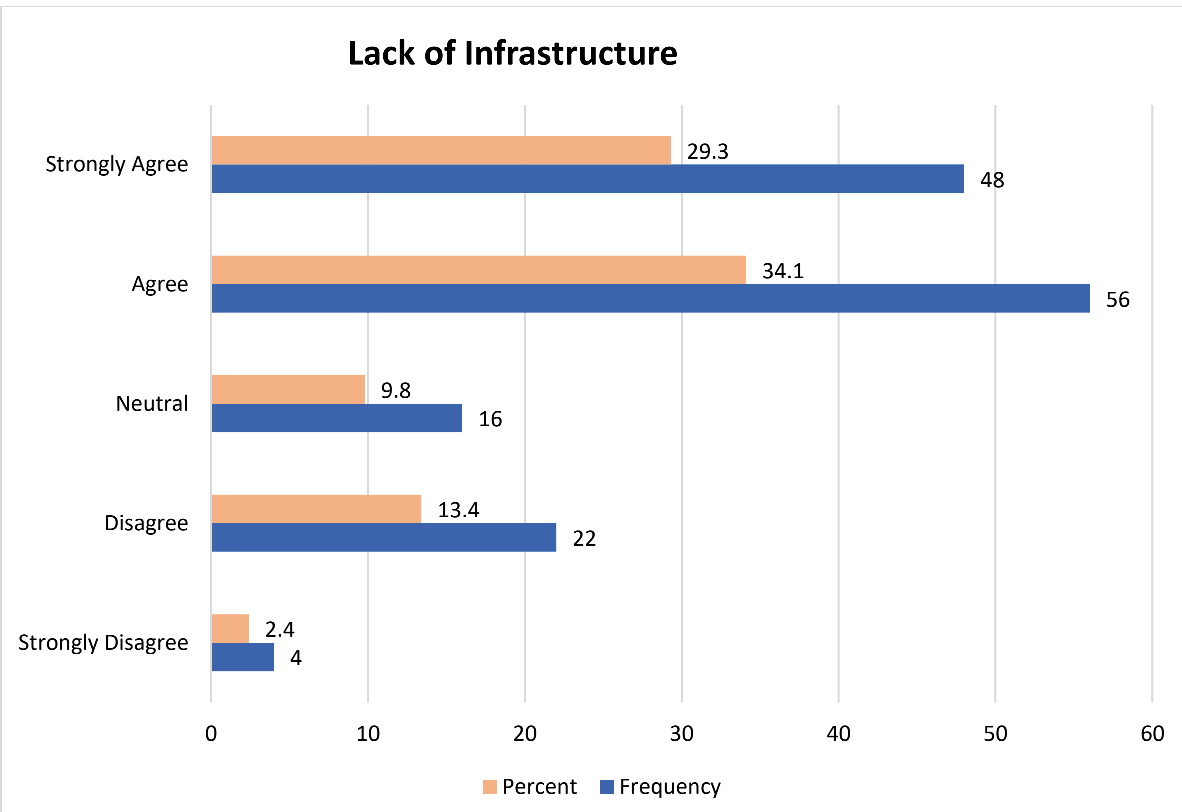

Figure 5.19: Lack of Infrastructure

The study further investigated whether the lack of proper infrastructure could affect financial governance in the TUs. As shown in table 5.22 and figure 5.19, more than a third of the respondents (56 or 34.1 percent) agreed, while 48 (29.3 percent) strongly agreed the lack of infrastructure has a significant influence on financial governance. However, 22

(13.4 percent) respondents disagreed, and four (2.4 percent) strongly disagreed with the statement.

Table 5.23: Competition among Technical Universities (TUs)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	4.9	5.5	5.5
	Disagree	16	9.8	11.0	16.4
	Neutral	27	16.5	18.5	34.9
	Agree	50	30.5	34.2	69.2
	Strongly Agree	45	27.4	30.8	100.0
	Total	146	89.0	100.0	
Missing	System	14	11.0		
Total		160	100.0		

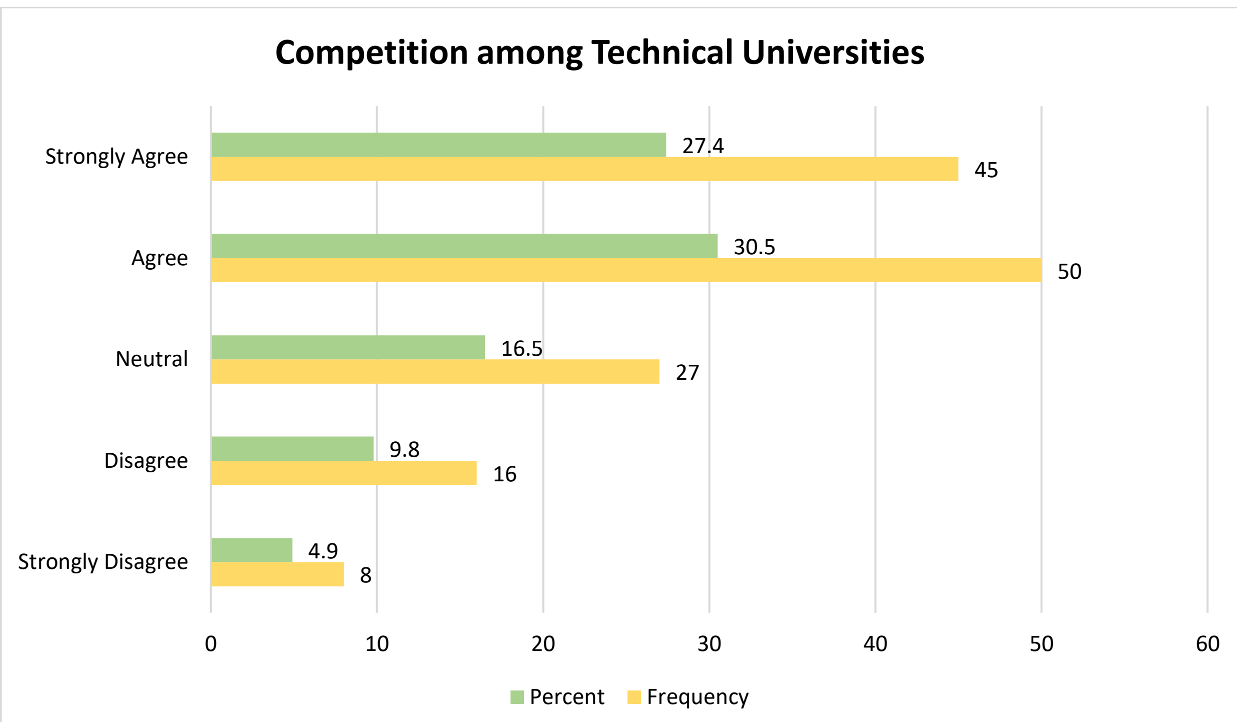

Figure 5.20: Competition among Technical Universities (TUs)

Table 5.24 and figure 5.20 show 50 (30.5 percent) respondents agreed competition among TUs affects financial governance of the institution. Similarly, a lesser number of respondents (45 or 27.4 percent) strongly agreed with the claim. Furthermore, 27 (16.5 percent) respondents remained neutral, 16 (9.8 percent) disagreed and eight (4.9 percent) strongly disagreed.

General responses proved the majority respondents believe competition among TUs does affect entrepreneurial financial governance in the universities. This means the growth and survival of a firm is also threatened through competition, while at the same time, "competition is often the main factor in achieving economic growth, as it motivates and pushes firms to be more productive" (Soini and Veseli 2011: 50). With competing firms not in control of the products, prices and services another firm offers, it is understood competitors play an important role in its external environment (Beach 2017). In Porter's (1985) theory, a firm's success is measured through competitive advantage, in relation to its competitors. Greater value is offered by competitive advantage to consumers through lower product or service costing or offering higher service or product quality, thus justifying increased prices (Pickard-Whitehead 2018).

Table 5.24: Inadequate Budgetary Allocations

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	4.3	4.8	4.8
	Disagree	8	4.9	5.5	10.3
	Neutral	11	6.7	7.5	17.8
	Agree	51	31.1	34.9	52.7
	Strongly Disagree	69	42.1	47.3	100.0
	Total	146	89.0	100.0	
Missing	System	14	11.0		
Total		160	100.0		

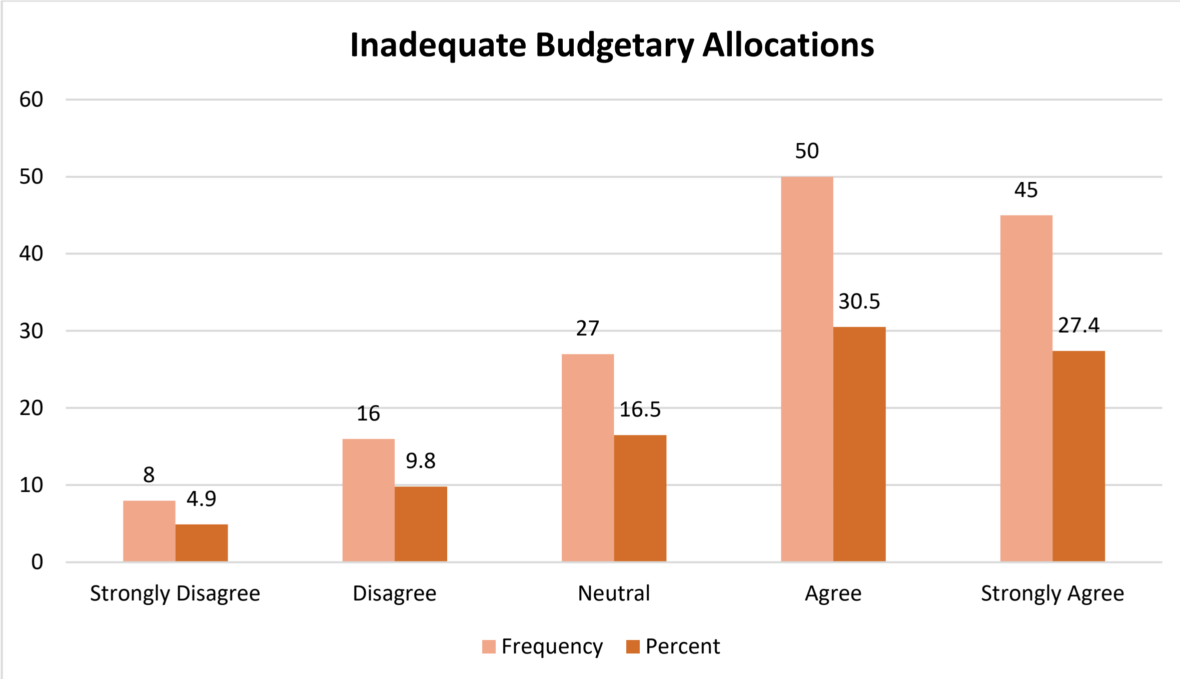

Figure 5.21: Inadequate Budgetary Allocations

It was revealed through the study, as depicted in table 5.24 and figure 5.21, a moderate number of respondents (50 or 30.5 percent) agreed inadequate budgetary allocations affects the financial governance of an organization, while 45 (27.4 percent) respondents strongly agreed. However, 27 (16.5 percent) respondents remained neutral, 16 (9.8 percent) and eight (4.9 percent) disagreed the inadequacy of budgetary allocations affects financial governance. Generally, the majority respondents believe when budgetary allocations are inadequate in an organization, it affects their financial governance. Further tests performed to ascertain the association between budgetary allocation and growth indicate (X2= 42.517; df = 16; P = 0.001), which shows there is a relationship between these variables.

This further suggests when there is inadequate allocation of funds to support entrepreneurial activities and businesses, it has an effect on the growth of the organization. Ogunode and Abubakar (2021) and Ogunode (2020) assert inadequate budgetary allocation is a political and economic decision that affects financial governance strategies of the TUs, while it is also responsible for shortage of funds in the system, placing considerable pressure on internally generated funds.

Table 5.25: Lack of Evaluation of Financing Options

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	3.7	4.1	4.1
	Disagree	22	13.4	15.1	19.2
	Neutral	22	13.4	15.1	34.2
	Agree	55	33.5	37.7	71.9
	Strongly agree	41	25.0	28.1	100.0
	Total	146	89.0	100.0	
Missing	System	14	11.0		
Total		160	100.0		

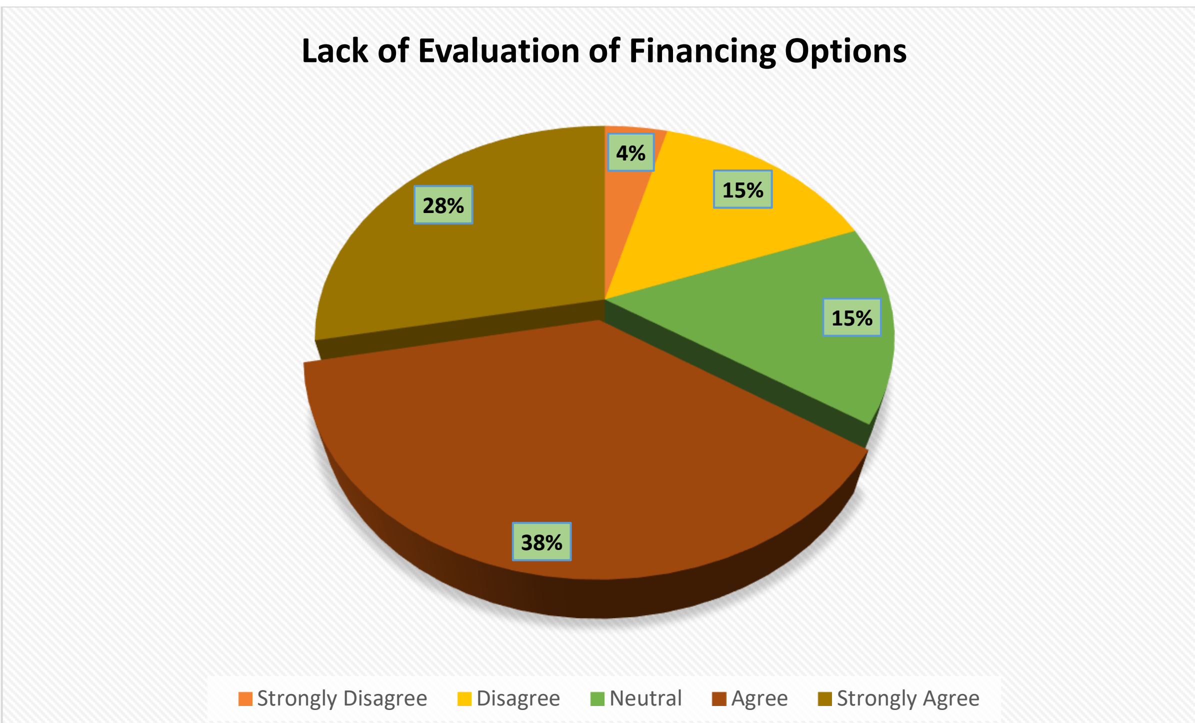

Figure 5.22: Lack of Evaluation of Financing Options

A study into whether the lack of evaluation of financial options could affect financial governance revealed that cumulatively, majority of respondents believed the lack of evaluation of financial options affects financial governance. This is clearly represented by 55 (33.5 percent) respondents that agreed and 41 (25 percent) strongly agreed with the claim. In addition, 22 (13.4 percent) respondents remained neutral, with 22 and six respondents, representing 13.4 and 3.7 percent, respectively disagreed and strongly disagreed the lack of evaluation of financial options is a major factor affecting financial governance. The results indicated (X2= 42.517; df = 16; P = 0.001) for this variable, reflecting a significant relationship between limit of state regulations and the financial governance of the organization.

Table 5.26: Ineffective Financial Monitoring Systems

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	2.4	2.7	2.7
	Disagree	20	12.2	13.7	16.4
	Neutral	8	4.9	5.5	21.9
	Agree	58	35.4	39.7	61.6
	Strongly agree	56	34.1	38.4	100.0
	Total	146	89.0	100.0	
Missing	System	14	11.0		
Total		160	100.0		

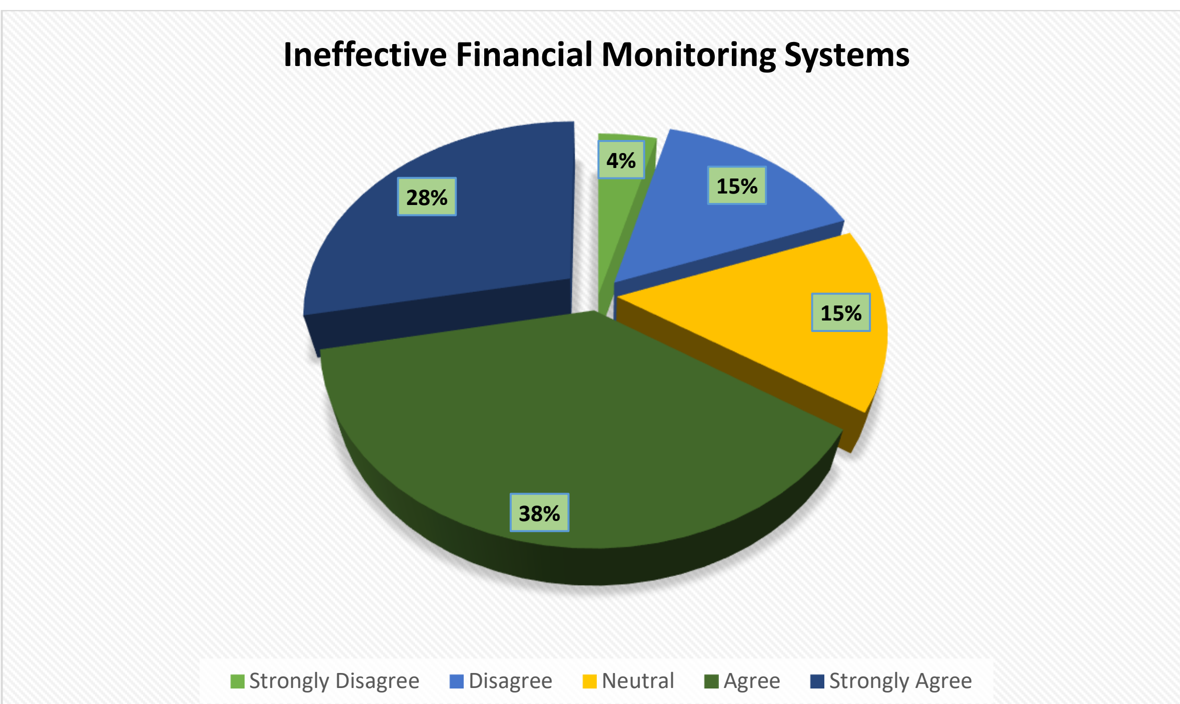

Figure 5.23: Ineffective Financial Monitoring Systems

Table 5.26 and figure 5.23 illustrate that 58 (35.4 percent) respondents agreed ineffective financial monitoring systems affect financial governance of the institution. Similarly, a moderate number of respondents (56 or 34.1 percent) strongly agreed with the claim. The study revealed eight (4.9 percent) respondents remained neutral, 20 (12.2 percent) disagreed and four (2.4 percent) strongly disagreed bad financial governance results from ineffective monitoring of the financial systems of an organization. However, the study also shows the majority respondents in agreement that ineffective financial monitory systems affect financial governance. Mukyala *et al*. (2017) affirm weak monitoring of activities in any local government lead to accountability failures.

Table 5.27: Lack of Dynamic Capabilities to venture into Academic Entrepreneurship

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	3	1.8	2.1	2.1
	Disagree	18	11.0	12.3	14.4
	Neutral	27	16.5	18.5	32.9
	Agree	54	32.9	37.0	69.9
	Strongly agree	44	26.8	30.1	100.0
	Total	146	89.0	100.0	
Missing	System	14	11.0		
Total		160	100.0		

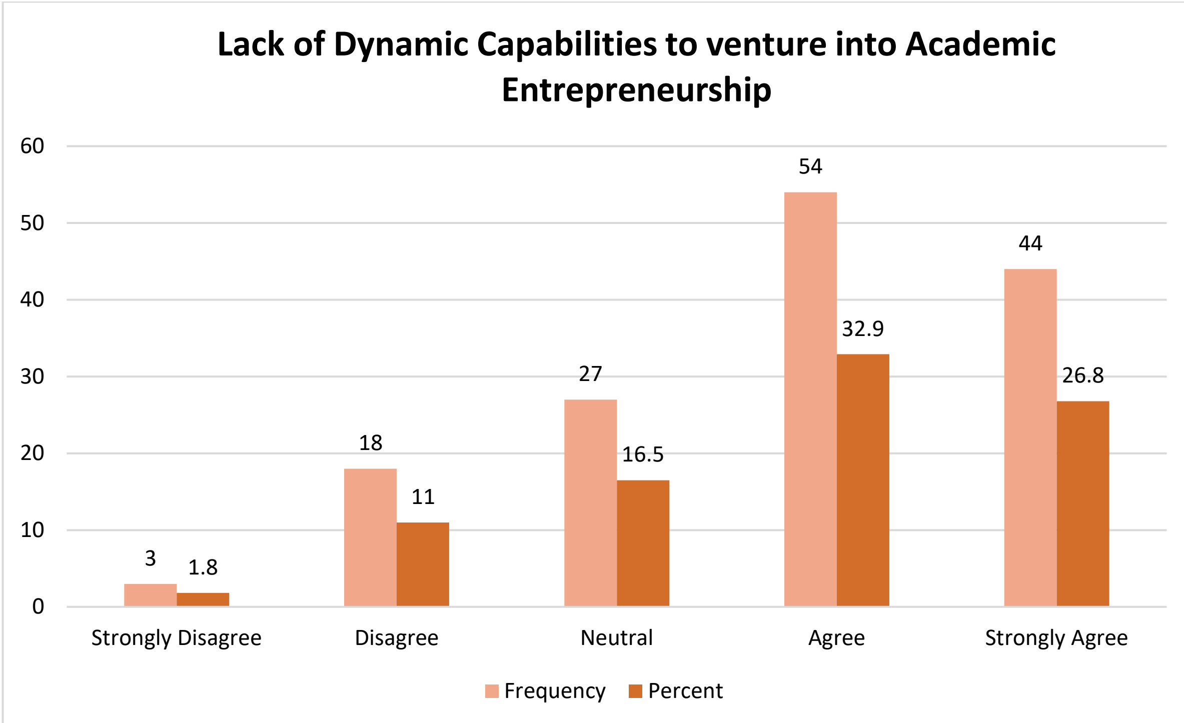

Figure 5.24: Lack of Dynamic Capabilities to venture into Academic Entrepreneurship

Table 5.27 and figure 5.24 show 54 (32.9 percent) respondents agreed the lack of dynamic capabilities to venture into academic entrepreneurship affects financial governance. Similarly, a smaller number of respondents (44 or 26.8 percent) strongly agreed with the claim. Several respondents (27 or 16.5 percent) remained neutral, 18 (11 percent) disagreed and three (1.8 percent) strongly disagreed the lack of dynamic capabilities to venture into academic entrepreneurship affects financial governance of organizations. This, however, proves the majority respondents agreed when there are no opportunities for organizations to venture into academic entrepreneurship, it tends to affect the organization’s financial governance.

The growing turbulence and uncertainty in the environment of modern organizations also impacts universities. As a result, Delke (2015) points out studies to identify entrepreneurial universities have been conducted across the globe (Australia, Canada, China, and the Netherlands, as well as Singapore, Germany, and the USA).

Table 5.28: Lack of Technology to be abreast with Financial Governance Strategies

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	2	1.2	1.4	1.4
	Disagree	20	12.2	13.7	15.1
	Neutral	17	10.4	11.6	26.7
	Agree	66	40.2	45.2	71.9
	Strongly agree	41	25.0	28.1	100.0
	Total	146	89.0	100.0	
Missing	System	14	11.0		
Total		160	100.0		

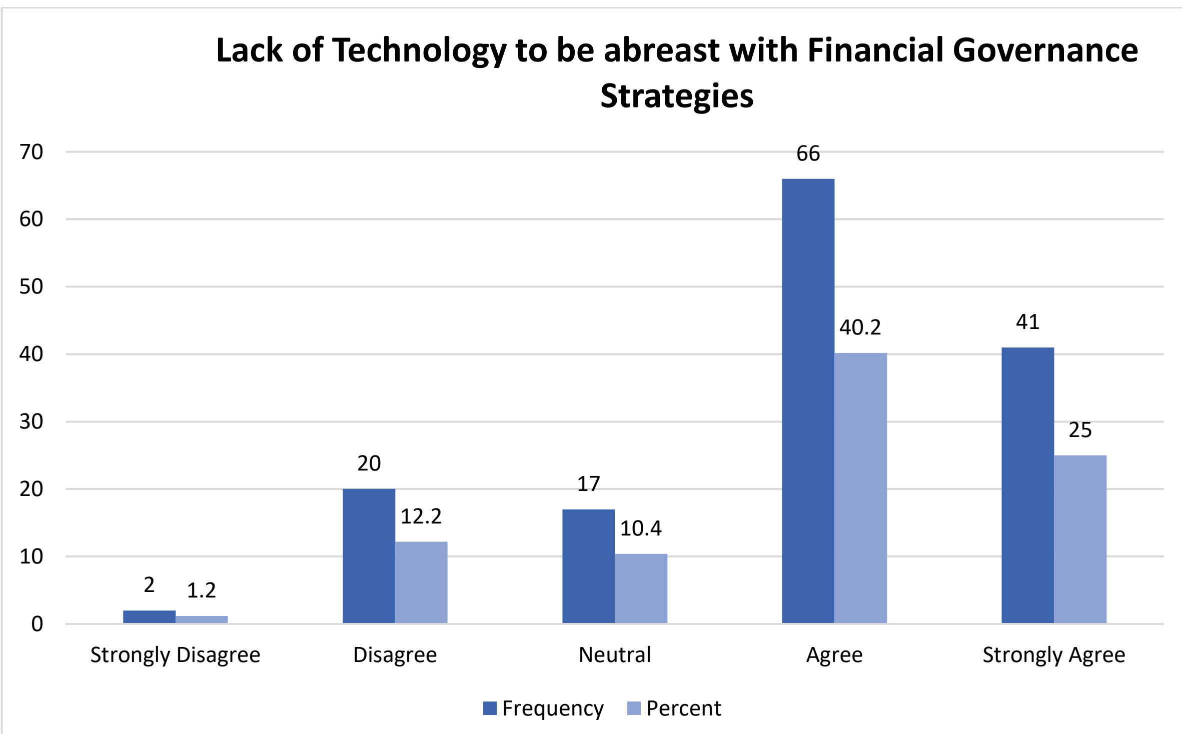

Figure 5.25: Lack of Technology to be abreast with Financial Governance Strategies

Table 5.28 and figure 5.25 depict agreement by 66 (40.2 percent) respondents that the lack of technology to stay up-to-date with financial governance strategies affects financial governance. Similarly, a smaller number of respondents (41 or 25 percent) strongly agreed with the claim. Fewer respondents (17 or 10.4 percent) remained neutral and 20

(12.2 percent) disagreed, while two (1.2 percent) strongly disagreed the lack of technology to remain-well-informed regarding financial governance strategies affects financial governance. Nevertheless, this proves the majority respondents agreed when an organization is up-to-date with the technological knowhow, this in turn, leads to effective and efficient financial governance strategies.

Various studies confirmed IT adoption by public sector entities nationally has to be regarded as fundamentally vital to financial governance development and survival (Bhatt & Bhatt 2017; Ducassy & Guyot 2017; Pillai & Al–Malkawi 2018); this influences firm competitiveness, as well as its financial performance. In this regard, Ghobakhloo *et al.* (2012: 58) highlighted the need for substantial investment of firms in IT, thus improving their competitive position (Premkumar 2003; Clibanu and Neamtu 2017).

Component Matrix: External factors affecting financial governance

Table 5.29: Component Matrix[a]

	Component
	1
Political factors	.687
Economic factors	.695
Limit of state regulations	.819
Lack of dynamic capabilities to venture into academic entrepreneurship	.749
Lack of technology to be breast with financial governance strategies	.781

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

These components are an additional statistical test performed on the above-mentioned figures (Figures 5.16–5.25). Analysis of responses revealed variables under the external factors affecting financial governance loaded strongly on just one component, indicating a very strong significance. A component test was performed on the statement regarding the limit of state regulations affecting financial governance, and a strong positive significance of 0.819 was determined. In addition, a strong and positive significance of 0.749 was obtained for the statement on the lack of dynamic capabilities to venture into academic entrepreneurship. For the significance of the lack of technology to remain abreast of financial governance strategies, a value of 0.781 was obtained. This indicates respondents strongly believed the limit of state regulations, dynamic capabilities to venture into academic entrepreneurship and the need for technology to assist in financial governance strategies, among others, do influence the financial governance of an organization.

5.7 THE FOLLOWING STATEMENTS ARE BASED ON THE RELIABILITY OF ENTREPRENEURIAL FINANCIAL GOVERNANCE STRATEGIES

Table 5.30: Universities appreciate the risk associated with engaging in business Activities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	5.6	5.6	5.6
	Disagree	59	36.9	36.9	42.5
	Neutral	20	12.5	12.5	55.0
	Agree	51	31.9	31.9	86.9
	Strongly Agree	21	13.1	13.1	100.0
	Total	160	100.0	100.0	

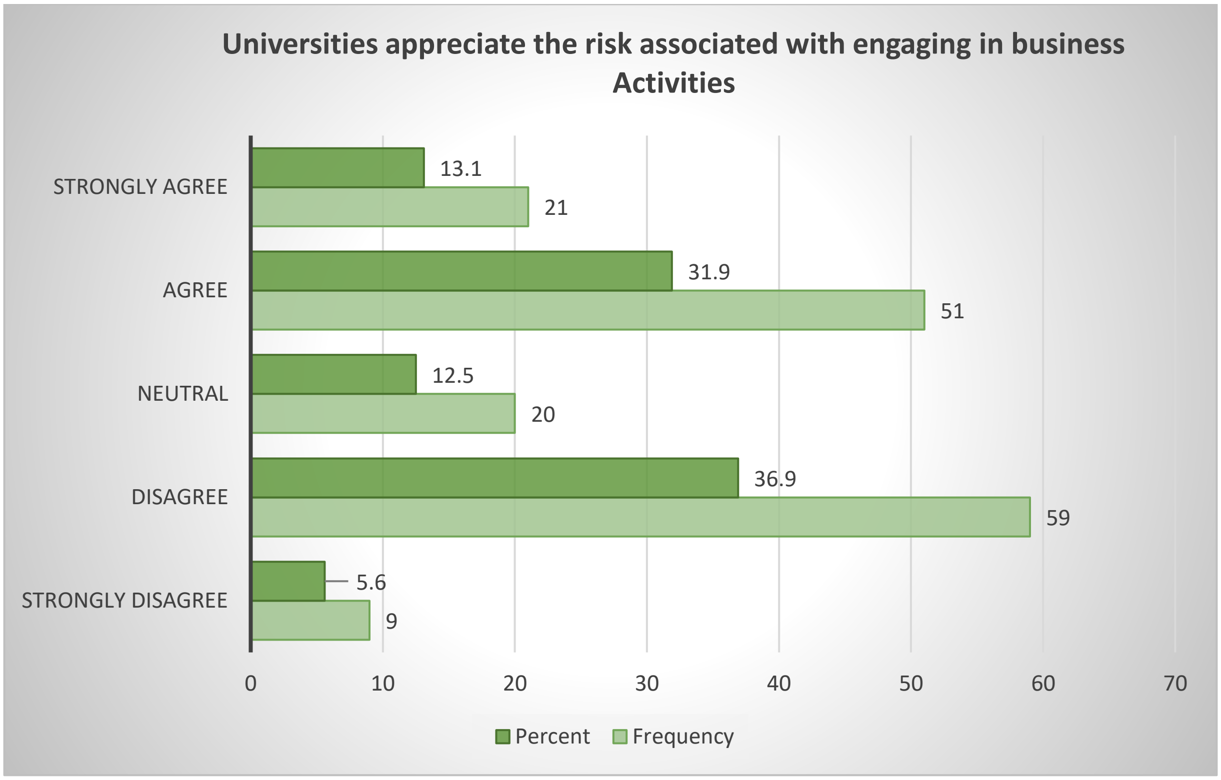

Figure 5.26: Universities appreciate the risk associated with engaging in business Activities

As shown in table 5.30 and figure 5.26, a moderate number of respondents (59 or 36.9 percent) disagreed and nine (5.6 percent) strongly disagreed universities appreciate the risk associated with engaging in business activities. A lesser number of respondents (20 or 12.5 percent) were neutral, while 51 (31.9 percent) agreed and 21 (13.1 percent) strongly agreed with the statement. The findings reveal most respondents were in favour of universities appreciating the risk associated with engaging in business activities.

Table 5.31: Risk are identified, monitored, and communicated to those charged with financial governance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	4.9	4.9	4.9
	Disagree	74	45.1	45.1	50.0
	Neutral	31	18.9	18.9	68.9
	Agree	34	20.7	20.7	89.6
	Strongly Agree	17	10.4	10.4	100.0

Total	160	100.0	100.0	

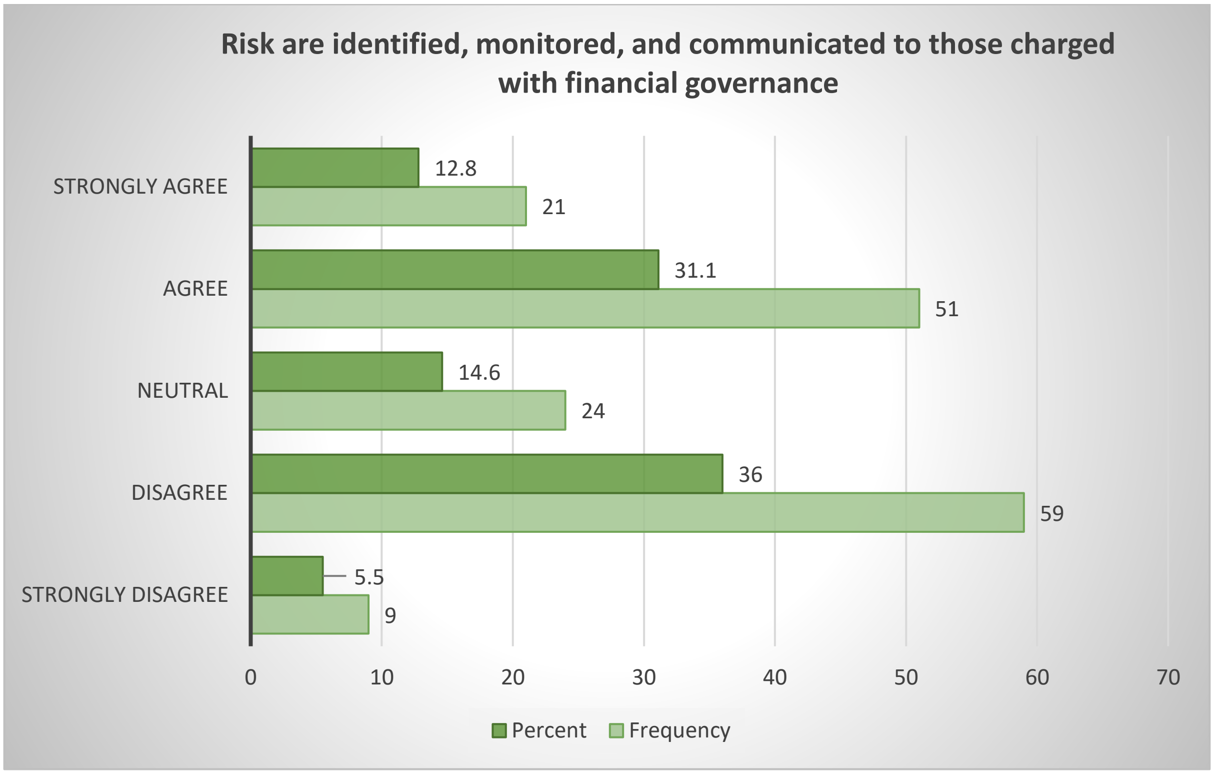

Figure 5.27: Risk are identified, monitored, and communicated to those charged with financial governance

As shown in table 5.31 and figure 5.27 a moderate number of the respondents (74 or 45.1 percent) disagreed and eight (4.9 percent) further strongly disagreed risks are identified, monitored, and communicated within their organizations, to those responsible for financial governance. A moderate number (31 or 18.9 percent) were neutral, while 34 (20.7 percent) agreed and 17 (10.4 percent) respondents strongly agreed with the statement. The findings revealed most respondents were in agreement the identifying of risks, their monitoring, and communicating these risks to those in charge of financial governance, ensures entrepreneurial financial governance strategy reliability.

The process of risk identification helps businesses to have a better understanding regarding the kind of risk they are exposed to or will potentially face (Yakob *et al*. 2019). Ferreira *et al*. (2019) indicated, to properly manage the risk their company is exposed to, risk managers must identify the sources of these risks.

In order to identify areas of potential deviations or deviation from plans or goals due to risk factors, various strategies can be employed by TU management, for example, free-associating, roundtable dialogues, cause-and-effect, and flowchart analysis, as well as interviews. Thus, the TUs must specify suitable objectives to identify and analyse risk, while also managing significant changes likely to affect their financial governance strategies.

Table 5.32: There is a critical evaluation of financing options of business projects of technical universities (TUs)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	14	8.8	8.8	8.8
	Disagree	64	40.0	40.0	48.8
	Neutral	27	16.9	16.9	65.6
	Agree	39	24.4	24.4	90.0
	Strongly Agree	16	10.0	10.0	100.0
	Total	160	100.0	100.0	

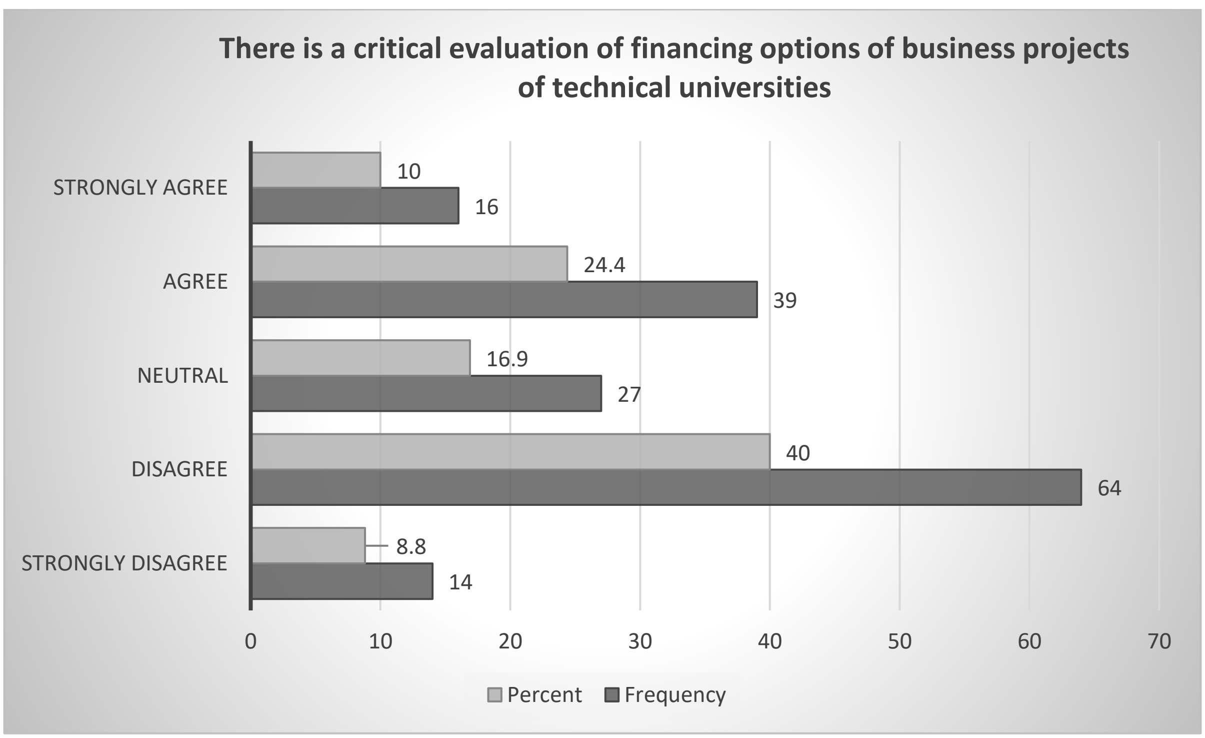

Figure 5.28: There is a critical evaluation of financing options of business projects

of technical universities (TUs)

As shown in table 5.32 and figure 5.28, a moderate number of respondents (64 or 40 percent) disagreed and 14 (8.8 percent) strongly disagreed there is no critical evaluation of financial options for TU business projects. A smaller number of respondents (27 or 16.9 percent) were neutral, while 39 (24.4 percent) agreed and 16 (10 percent) strongly agreed with the statement. The findings reveal most respondents were in disagreement that most TUs do not make critical evaluations of financial options for business projects prior to engaging in them, which does not ensure reliability in the entrepreneurial financial governance strategies of the TUs.

Table 5.33: Technical universities (TUs) put proper risk management practices in place

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	20	12.5	12.5	12.5
	Disagree	58	36.3	36.3	48.8
	Neutral	29	18.1	18.1	66.9
	Agree	38	23.8	23.8	90.6
	Strongly Agree	15	9.4	9.4	100.0
	Total	160	100.0	100.0	

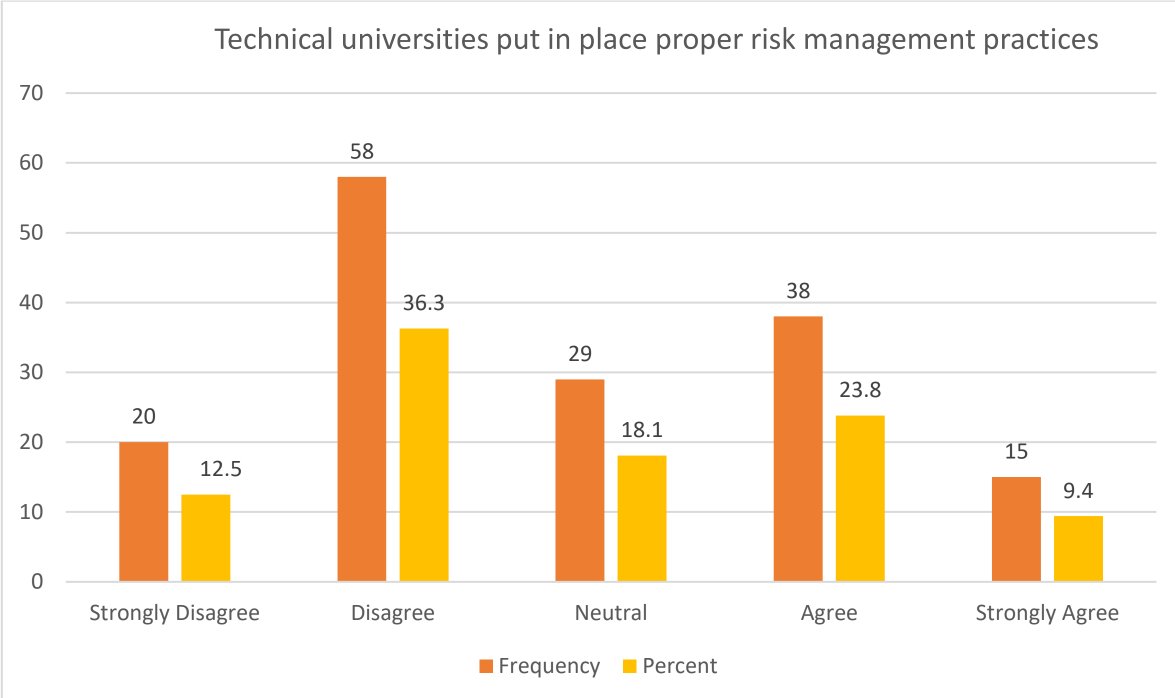

Figure 5.29: Technical Universities put proper risk management practices in place

As shown in table 5.33 and figure 5.29, almost a third of the respondents (58 or 36.3 percent) disagreed and 20 (12.5 percent) strongly disagreed TUs do not put proper risk management strategies in place to safeguard their operations. However, a considerable number of the respondents (29 or 18.1 percent) were neutral, while 38 (23.8 percent) agreed and 15 (9.4 percent) strongly agreed with the statement. The findings reveal most respondents were in disagreement pertaining to the statement that TUs do put proper risk management practices in place.

Table 5.34: There is entrepreneurial financial planning for all businesses

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	12	7.5	7.5	7.5
	Disagree	70	43.8	43.8	51.3
	Neutral	29	18.1	18.1	69.4
	Agree	32	20.0	20.0	89.4
	Strongly Agree	17	10.6	10.6	100.0
	Total	160	100.0	100.0	

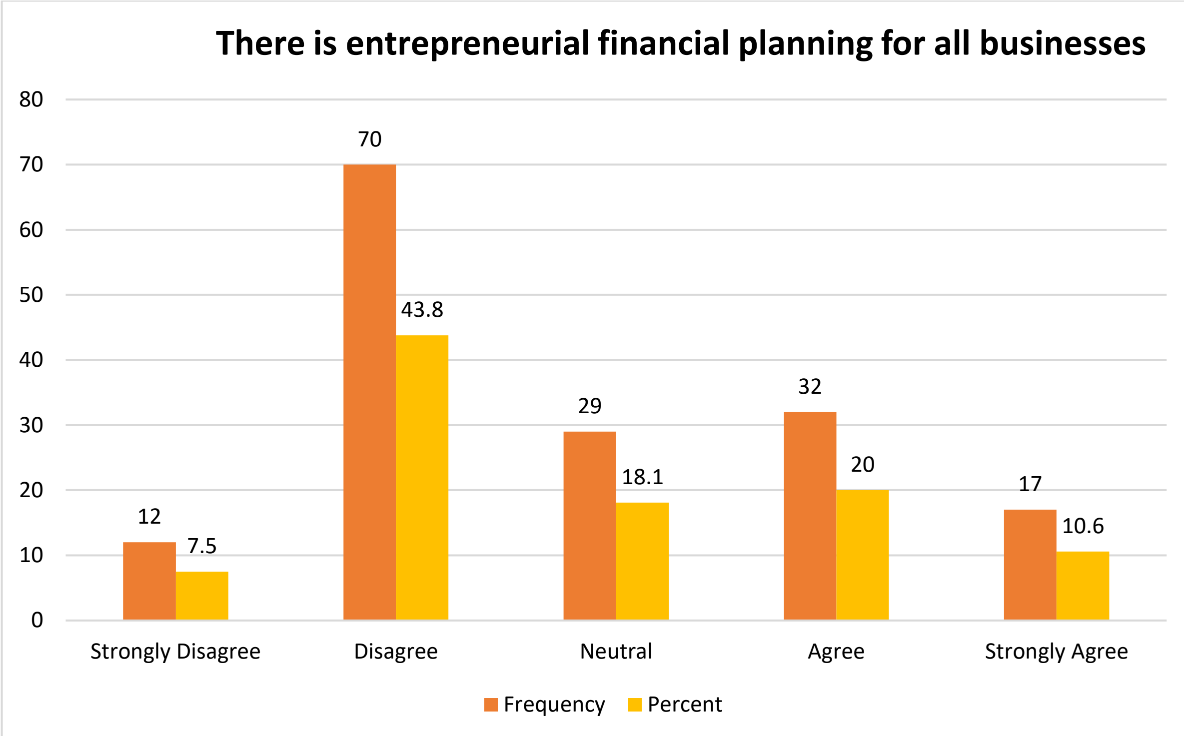

Figure 5.30: There is entrepreneurial financial planning for all businesses

As depicted in table 5.34 and figure 5.30, responses to whether there is entrepreneurial financial planning for all businesses revealed the majority respondents opposed the statement insinuating there is not enough education on entrepreneurial financial planning for TUs. This is represented by close to half the respondents (70 or 43.8 percent) disagreeing, with 12 (7.5 percent) strongly disagreeing, while 32 (20 percent) agreed and 17 (10.6 percent) strongly agreed there is education on entrepreneurial financial planning for all businesses. However, 29 (18.1percent) respondents remained neutral.

Table 5.35: Development of strategic alliances with other businesses towards its entrepreneurial drive

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	16	10.0	10.0	10.0
	Disagree	66	41.3	41.3	51.3
	Neutral	19	11.9	11.9	63.1

	Agree	41	25.6	25.6	88.8
	Strongly Agree	18	11.3	11.3	100.0
	Total	160	100.0	100.0	

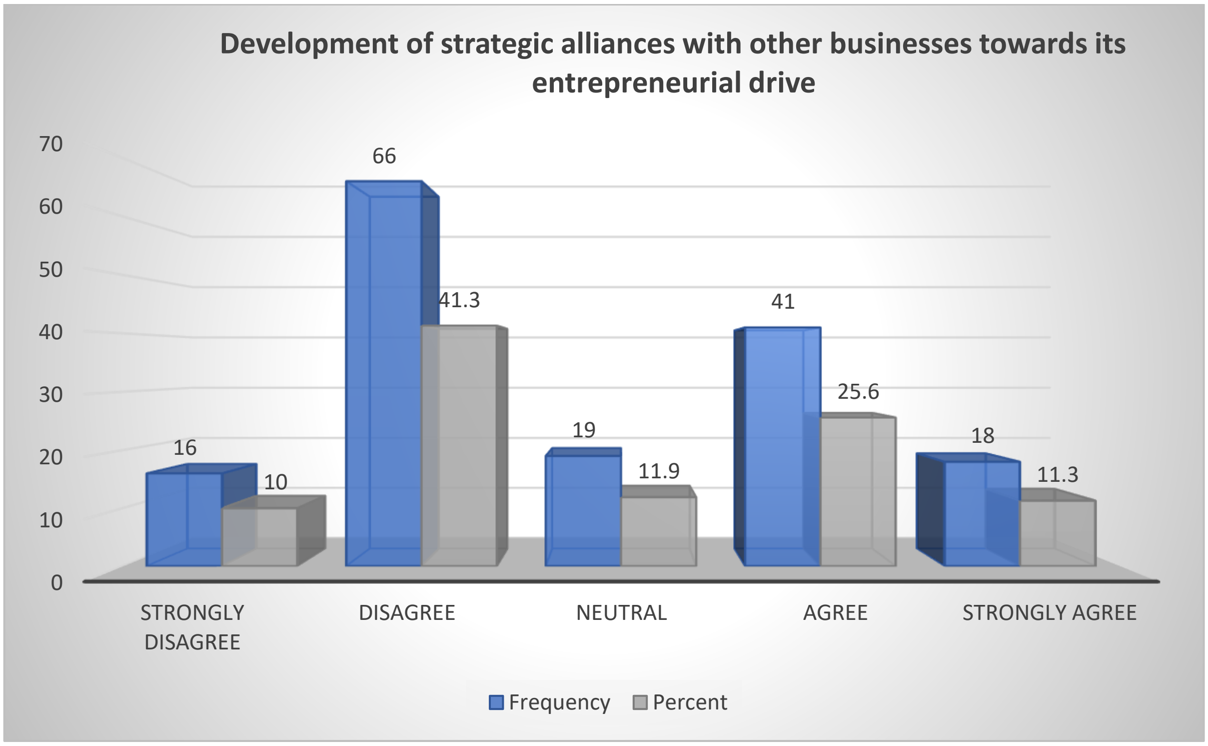

Figure 5.31: Development of strategic alliances with other businesses towards its entrepreneurial drive

Table 5.35 and figure 5.31 depict respondent views regarding whether the development of strategic alliances with other businesses towards its entrepreneurial drive can affect entrepreneurial financial governance. Analysis of responses revealed 66 (41.3 percent) respondents disagreed, while 16 (10 percent) strongly disagreed developing strategic alliances with other businesses towards the TU entrepreneurial drive does not affect its financial governance. Although a small number of respondents (19 or 11.9 percent) remained neutral, 41 (25.6 percent) agreed and 18 (11.3 percent) strongly agreed with the claim.

Component matrix: Reliability of Entrepreneurial Financial Governance Strategies

Table 5.36: Component Matrix[a]

	Component
	1
University appreciates the risk associated with engaging in business activities	.854
Risk is identified, monitored, and communicated to these charges with financial governance	.865
There is a critical evaluation of financing options of business projects of technical universities	.883
Technical universities put in place proper risk management practices	.871
There is entrepreneurial financial planning for all business	.810
Development of strategic alliance with other business towards its entrepreneurial drive	.814

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

These components are a further statistical test performed on the above-mentioned figures (Figure 5.26 – 5.31). The response analysis revealed variables pertaining to the reliability of Entrepreneurial Financial Governance Strategies developed and implemented by TU management. Factors loaded strongly on just one component, indicating a very strong significance. A component test was performed on the statement regarding whether there is a critical evaluation of financing options of TU business projects, with a strong positive significance of 0.883 obtained. Furthermore, a strong and positive significance of 0.871 was obtained for the statement TUs put proper risk management practices in place.

For the significance of whether risks are identified, monitored, and communicated to those charged with financial governance, a value of 0.865 was obtained. With regard to the significance of whether there is entrepreneurial financial planning for all business, a value of 0.810 was obtained, while a value of .814 was obtained for development of strategic alliance with other business towards TU entrepreneurial drive. This indicates respondents strongly believed all these factors loaded under component one determine the reliability of Entrepreneurial Financial Governance Strategies developed and implemented by management.

THE FOLLOWING STATEMENTS ARE BASED ON ENTREPRENEURIAL FINANCIAL LEADERSHIP GOVERNANCE

Table 5.37: There are essential investments in the physical, human and technological infrastructure

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	5.6	5.6	5.6
	Disagree	42	26.3	26.3	31.9
	Neutral	15	9.4	9.4	41.3
	Agree	65	40.6	40.6	81.9
	Strongly Agree	29	18.1	18.1	100.0
	Total	160	100.0	100.0	

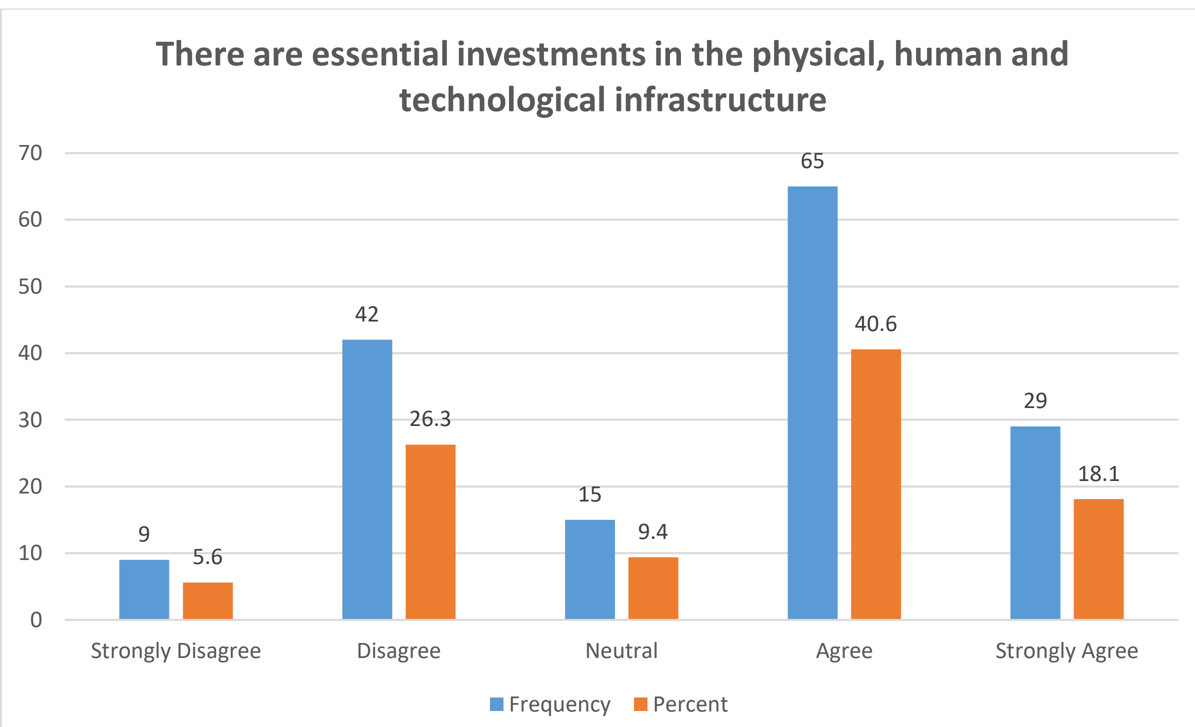

Figure 5.32: There are essential investments in the physical, human and technological infrastructure

As shown in table 5.37 and figure 5.32, many respondents (65 or 40.6 percent) agreed and 29 (18.1 percent) strongly agreed there are essential investments in the physical, human and technological infrastructure of TUs. However, only a few respondents (19 or 11.6 percent) were neutral, while 42 (26.3 percent) disagreed and nine (5.6 percent) strongly disagreed with the statement. The findings revealed most respondents were in agreement regarding the statement that entrepreneurial financial leadership governance is influenced by essential investment in the physical, human and technological infrastructure of TUs.

Table 5.38: Providing policy encouragement and an enabling environment for university entrepreneurial activities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	5.6	5.6	5.6
	Disagree	68	42.5	42.5	48.1
	Neutral	21	13.1	13.1	61.3
	Agree	42	26.3	26.3	87.5
	Strongly Agree	20	12.5	12.5	100.0
	Total	160	100.0	100.0	

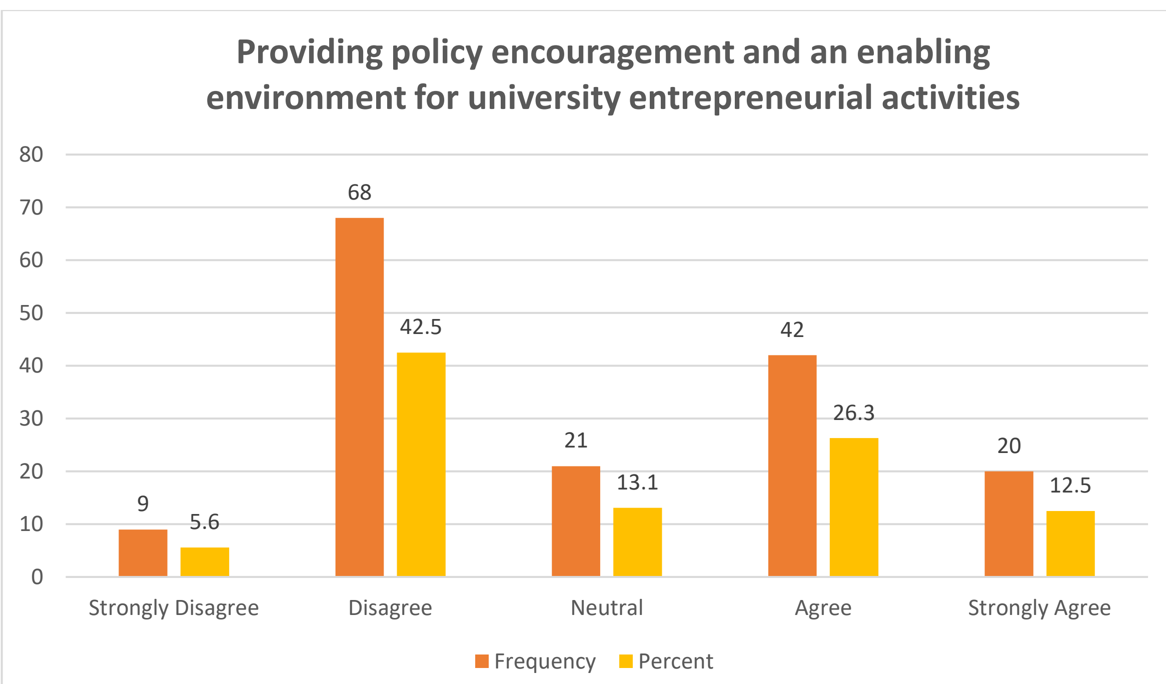

Figure 5.33: Providing policy encouragement and an enabling environment for university entrepreneurial activities

Table 5.38 and figure 5.33 illustrate respondent views on whether university management provides policy encouragement and an enabling environment for entrepreneurial activities. Response analysis revealed 68 (42.5 percent) respondents disagreed, while nine (5.6 percent) strongly disagreed the university management neither provides any form of policy encouragement, nor do they create an enabling environment for entrepreneurial activities. A smaller number of respondents (21 or 13.1 percent) remained neutral, 42 (26.3 percent) agreed and 20 (12.5 percent) respondents strongly agreed with the claim.

Table 5.39: TUs promote entrepreneurial culture

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	13	8.1	8.1	8.1
	Disagree	66	41.3	41.3	49.4
	Neutral	22	13.8	13.8	63.1
	Agree	35	21.9	21.9	85.0
	Strongly Agree	24	15.0	15.0	100.0
	Total	160	100.0	100.0	

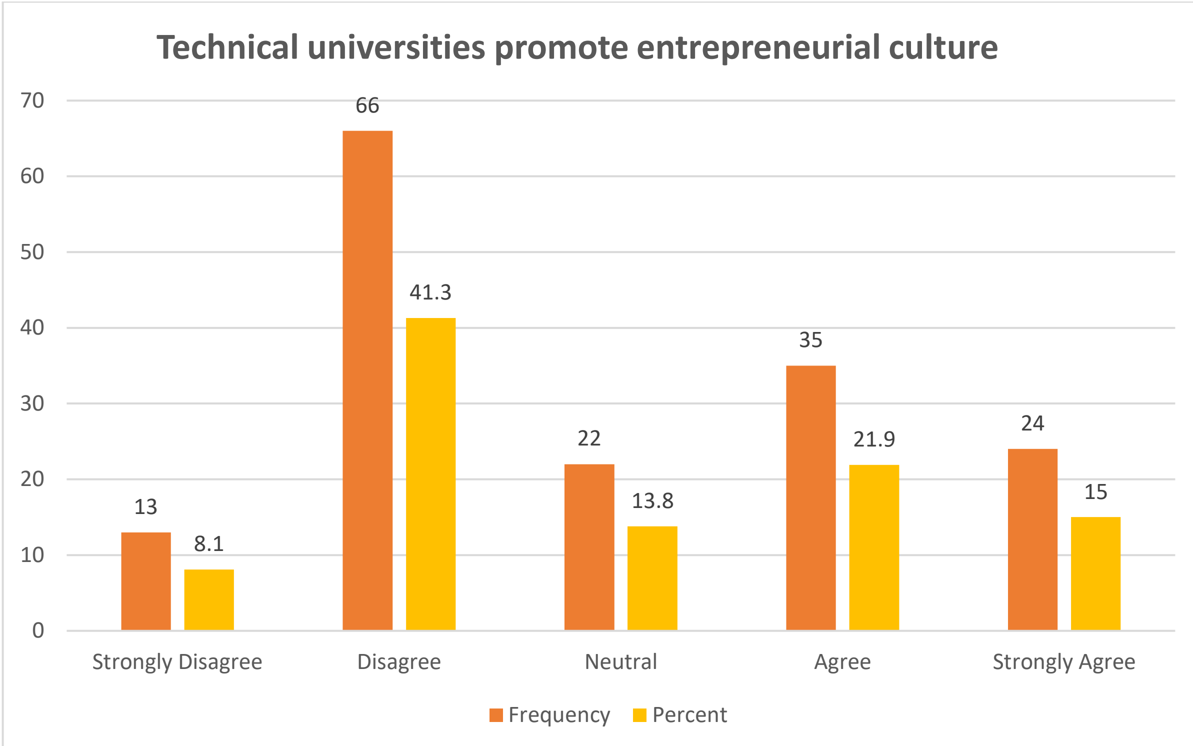

Figure 5.34: Technical Universities promote entrepreneurial culture

The study delved into whether TUs promote an entrepreneurial culture within the university setting. Table 5.39 and figure 5.34, show that 66 (41.3 percent) respondents disagreed, while 13 (8.1 percent) strongly disagreed TUs do not promote an entrepreneurial culture. However, 22 (13.8 percent) respondents remained neutral, whereas 35 (21.9 percent) respondents agreed and 24 (15 percent) strongly agreed. This suggests the majority respondents believed TUs do not promote a culture of entrepreneurship.

Table 5.40: There is management support for entrepreneurial business activities in the universities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	14	8.8	8.8	8.8
	Disagree	66	41.3	41.3	50.0
	Neutral	21	13.1	13.1	63.1
	Agree	37	23.1	23.1	86.3
	Strongly Agree	22	13.8	13.8	100.0

Total	160	100.0	100.0	

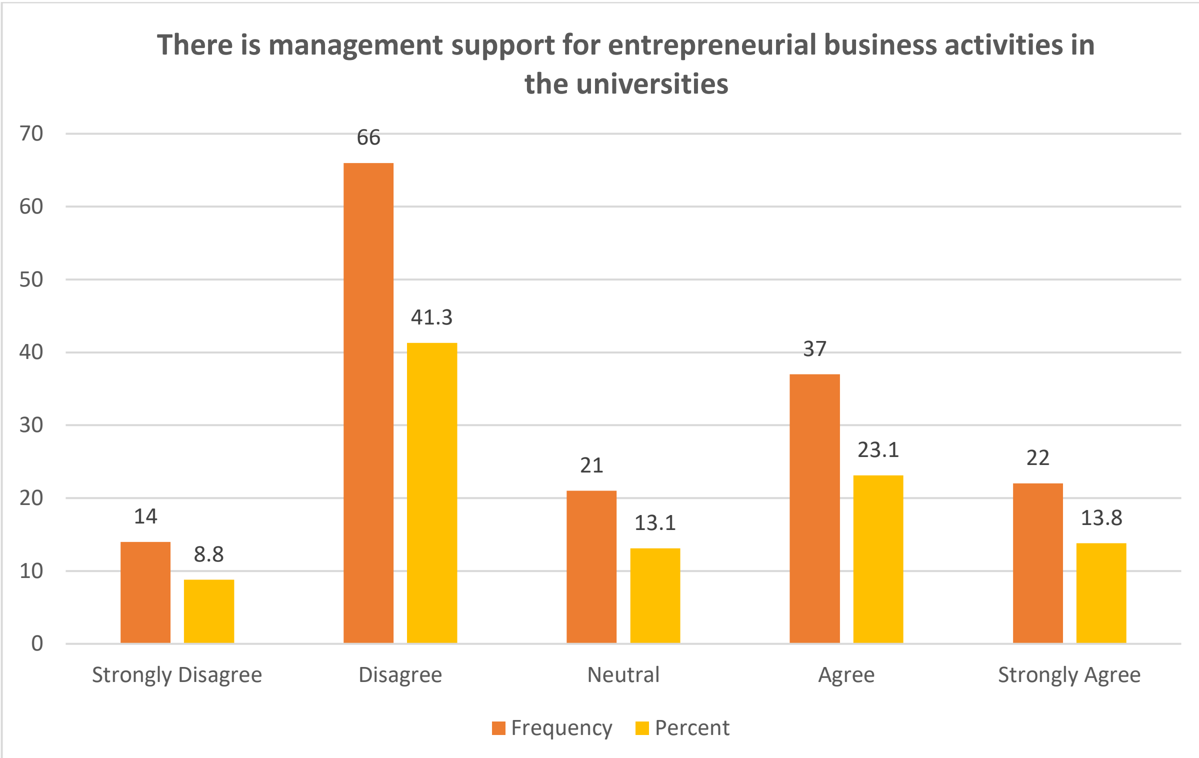

Figure 5.35: There is management support for entrepreneurial business activities in the universities

On whether management supports entrepreneurial business activities in universities, the study revealed, as shown in Table 5.40 and figure 5.35, 66 (41.3 percent) respondents disagreed, while 14 (8.8percent) further strongly disagreed universities management do not provide support for entrepreneurial business activities. However, 21 (13.1 percent) were neutral, with 37 (23.1 percent) respondents in agreement and 22 (13.8 percent) that strongly agreed. This suggests the majority respondents believed management support for entrepreneurial business activities is not forthcoming.

Entrepreneurial leadership and its influence on HE performance in Khyber Pakhtunkhwa province, Pakistan, were investigated by Shaheen *et al.* (2020). It was found entrepreneurial leadership concentrates on the vision and goals of the organization, its original inventions and improvements, adaptability, and resourcefulness, along with its passion, risk-taking propensity, and available resources from potential outside institutions. It was proposed training sessions for university leadership in the province of Khyber

Pakhtunkhwa in Pakistan be instituted, preparing them to lead the universities to their intended goals via entrepreneurial leadership attributes (Shaheen *et al.* 2020).

Table 5.41: There is promotion of Innovation and new thinking of generating income for universities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	22	13.8	13.8	13.8
	Disagree	54	33.8	33.8	47.5
	Neutral	21	13.1	13.1	60.6
	Agree	41	25.6	25.6	86.3
	Strongly Agree	22	13.8	13.8	100.0
	Total	160	100.0	100.0	

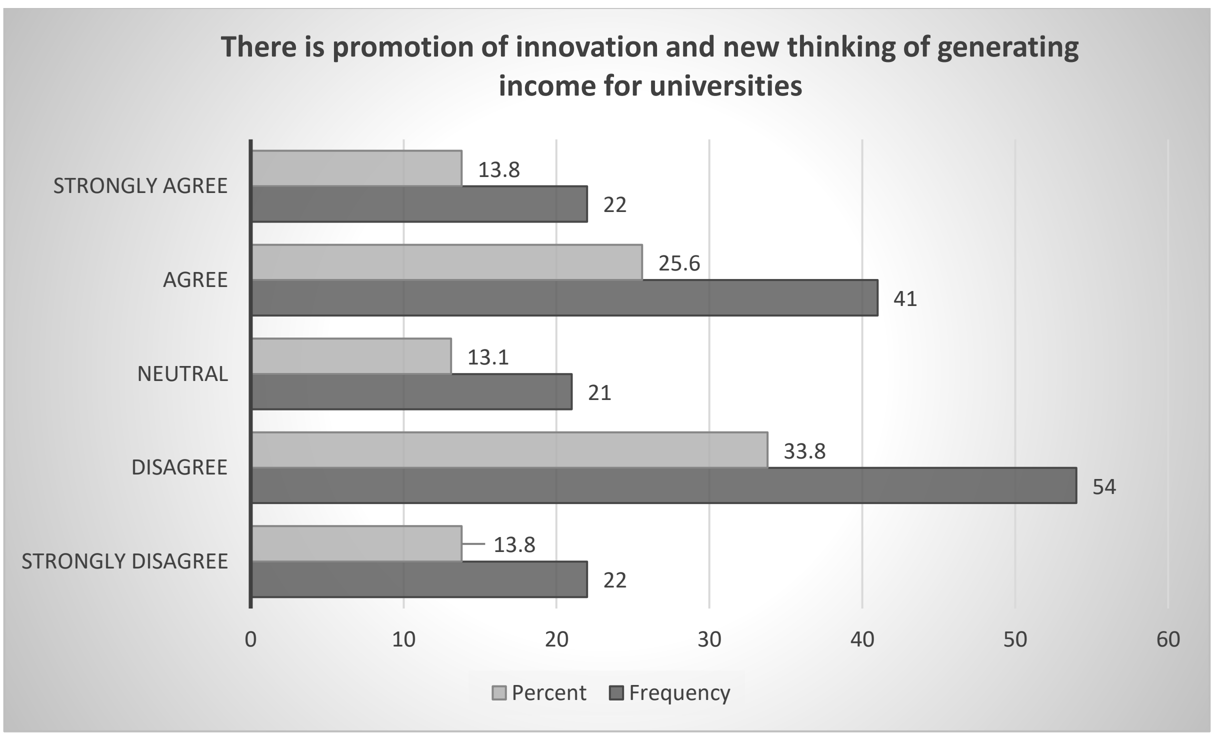

Figure 5.36: There is promotion of innovation and new thinking of generating income for universities

As shown in table 5.41 and figure 5.36, there was cumulative agreement by 63 respondents (41 agreed and 22 strongly agreed), while 76 (54 disagreed and 22 strongly disagreed) respondents cumulatively disagreed there is promotion of innovation and new thinking in generating university income.

Component matrix: Entrepreneurial Financial Leadership Governance

Table 5.42: Component Matrix[a]

	Component
	1
Providing the policy encouragement and enabling environment for university entrepreneurial activities	.809
Technical universities promote entrepreneurial culture	.894
There is management support for entrepreneurial business activities in the universities	.886
There is promotion of innovation and new thinking of generating income for universities	.854

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

These components are a further statistical test performed on the above-mentioned figures (Figure 5.30 – 5.36). Analysis of responses revealed variables regarding entrepreneurial financial leadership governance loaded strongly on just one component, indicating a very strong significance. A component test was performed on the statement regarding whether TUs promote a culture of entrepreneurship within the university environment, and a strong positive significance of 0.894 was obtained. In addition, a strong and positive significance of 0.886 was obtained for the statement, there is management support for entrepreneurial business activities within the universities. For the significance of whether there is promotion of innovation and new thinking regarding generating income for universities, a value of 0.854 was obtained. These variable loadings show respondents strongly believed all factors that loaded under this component ensure Entrepreneurial Financial Leadership Governance in TUs.

THE FOLLOWING STATEMENTS ARE ON THE ENTREPRENEURIAL FINANCIAL LEADERSHIP GOVERNANCE ROLE

Table 5.43: University leadership encourages entrepreneurship within the Community

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	18	11.3	11.3	11.3
	Disagree	67	41.9	41.9	53.1
	Neutral	12	7.5	7.5	60.6
	Agree	42	26.3	26.3	86.9
	Strongly Agree	21	13.1	13.1	100.0
	Total	160	100.0	100.0	

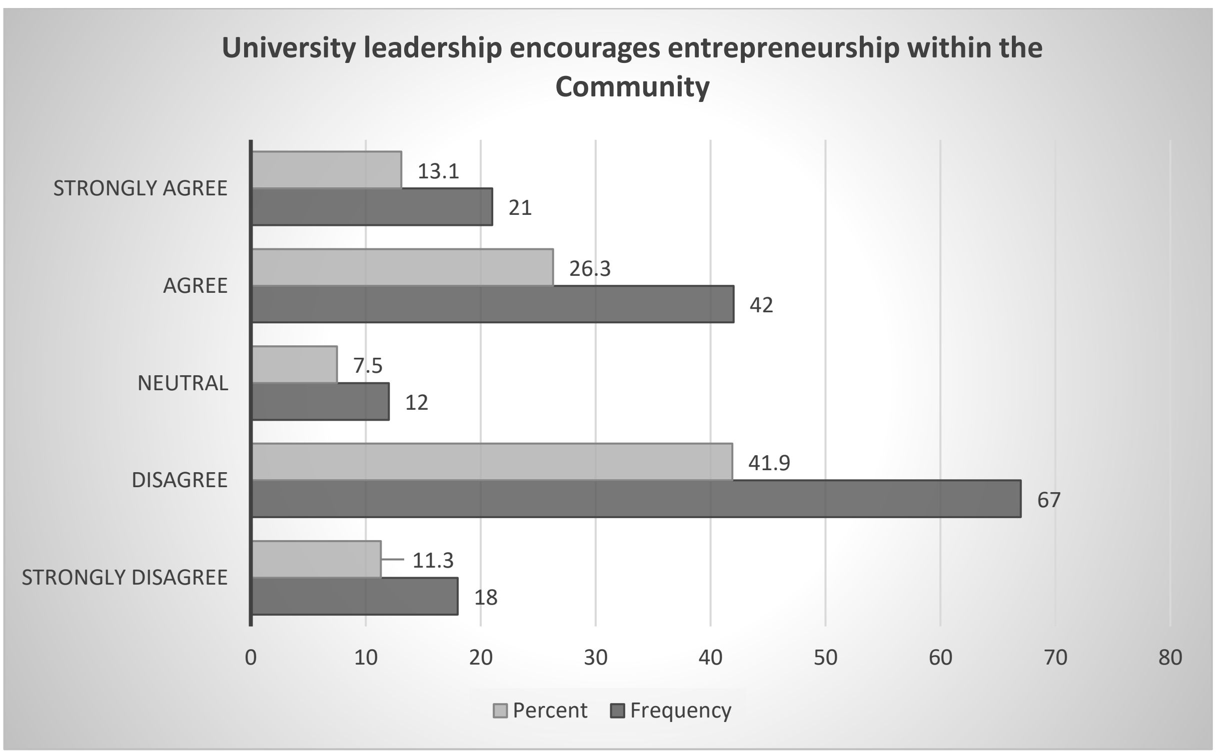

Figure 5.37: University leadership encourages entrepreneurship within the Community

Table 5.43 and figure 5.37 show responses whether university leadership encourages entrepreneurship within the Community. The response analysis revealed 67 (41.9

percent) respondents disagreed, while 18 (11.3 percent) strongly disagreed the university leadership does not encourage entrepreneurship within the community. Although few respondents (12 or 7.5 percent) remained neutral, 42 (26.3 percent) respondents agreed and 21 (13.1 percent) strongly agreed with the claim. These findings suggest the majority respondents strongly believe TU leadership has much to do in encouraging engagement by the university community in entrepreneurship, to realise entrepreneurial financial governance and stability.

Further to this, the TU leaders should not only decide, give orders, and monitor their employees, they should also choose to be entrepreneurial leaders who lead the team and show the way. This type of leadership has been shown as highly significant for the future growth of the firm when entrepreneurs take risks and grasp possibilities (Phaneuf *et al*. 2016), which means it is a noteworthy phenomenon for TU management to demonstrate entrepreneurial leadership within the university community.

Table 5.44: Adequate resources are committed to university entrepreneurship activities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	11	6.9	6.9	6.9
	Disagree	81	50.6	50.6	57.5
	Neutral	21	13.1	13.1	70.6
	Agree	30	18.8	18.8	89.4
	Strongly Agree	17	10.6	10.6	100.0
	Total	160	100.0	100.0	

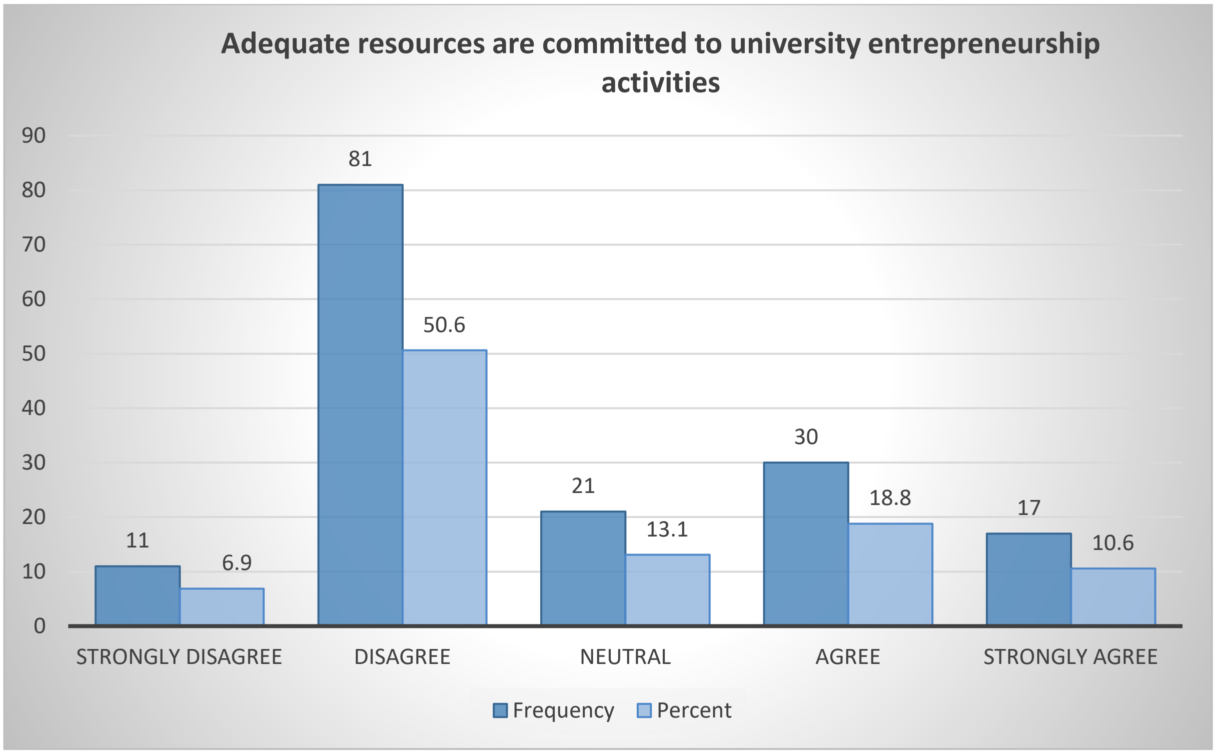

Figure 5.38: Adequate resources are committed to university entrepreneurship activities

The study explored whether TUs have adequate resources committed to entrepreneurial activities. Table 5.44 and figure 5.38 show almost half the respondents (81 or 50.6 percent) disagreed, while 11 (6.9 percent) strongly disagreed universities do not have adequate resources committed to entrepreneurship. However, 21 (13.1 percent) respondents were neutral, 30 (18.8 percent) respondents agreed and 17 (10.6 percent) strongly agreed. Cumulatively, responses suggest the majority respondents believed there are no adequate resources committed to university entrepreneurial activities.

Table 5.45: University provides opportunity for students to gain work experience through its business programmes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	7	4.4	4.4	4.4
	Disagree	43	26.9	26.9	31.3
	Neutral	21	13.1	13.1	44.4
	Agree	61	38.1	38.1	82.5
	Strongly Agree	28	17.5	17.5	100.0

Total	160	100.0	100.0	

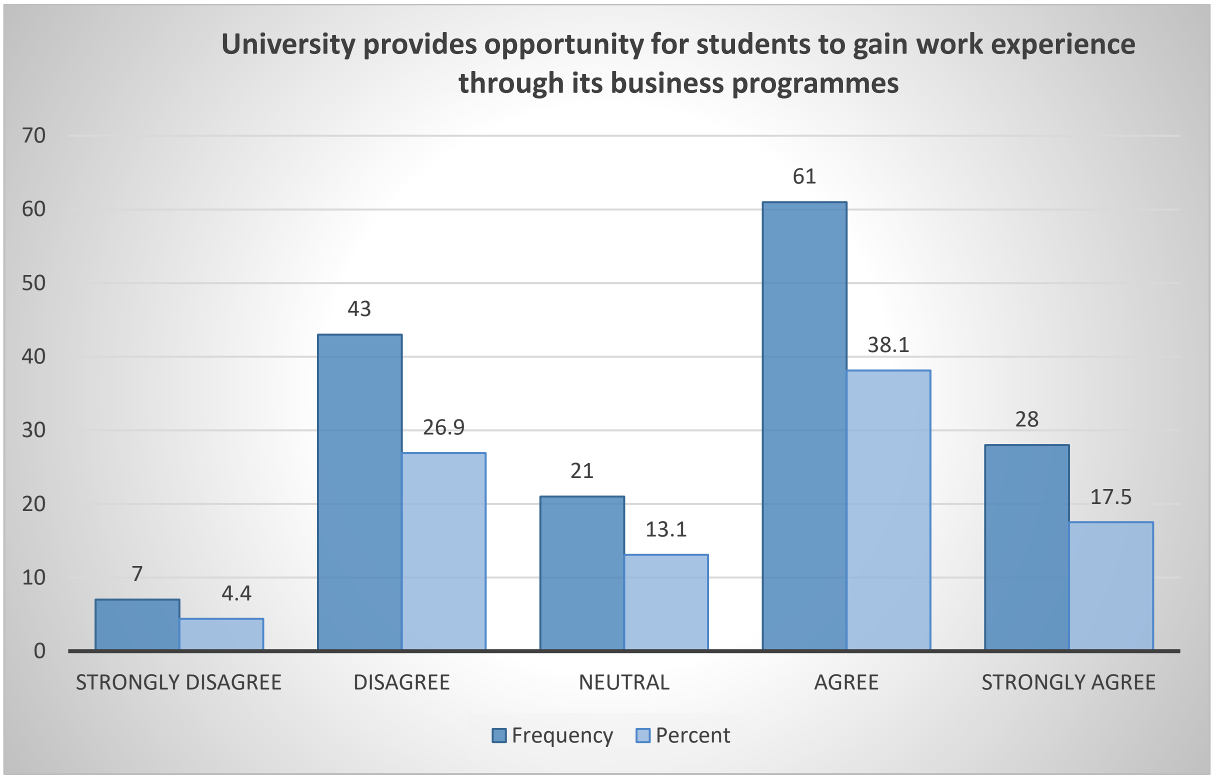

Figure 5.39: University provides student opportunities to gain work experience through its business programmes

With regard to whether universities provide opportunities for students to gain work experience through their business programmes, table 5.45 and figure 5.39 revealed many respondents (61 or 38.1 percent) agreed, while 28 (17.5 percent) strongly agreed universities provide opportunity for students to gain work experience through their business programmes. However, 21 (13.1 percent) respondents were neutral, 43 (26.9 percent) disagreed and seven (4.4 percent) strongly disagreed. Cumulatively, responses indicate the majority respondents are of the view universities provide avenues for students to gain work experience through their business programmes.

Table 5.46: University promotes incubation of business ideas from both faculty and students alike

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	5.6	5.6	5.6
	Disagree	46	28.8	28.8	34.4
	Neutral	17	10.6	10.6	45.0
	Agree	62	38.8	38.8	83.8
	Strongly Agree	26	16.3	16.3	100.0
	Total	160	100.0	100.0	

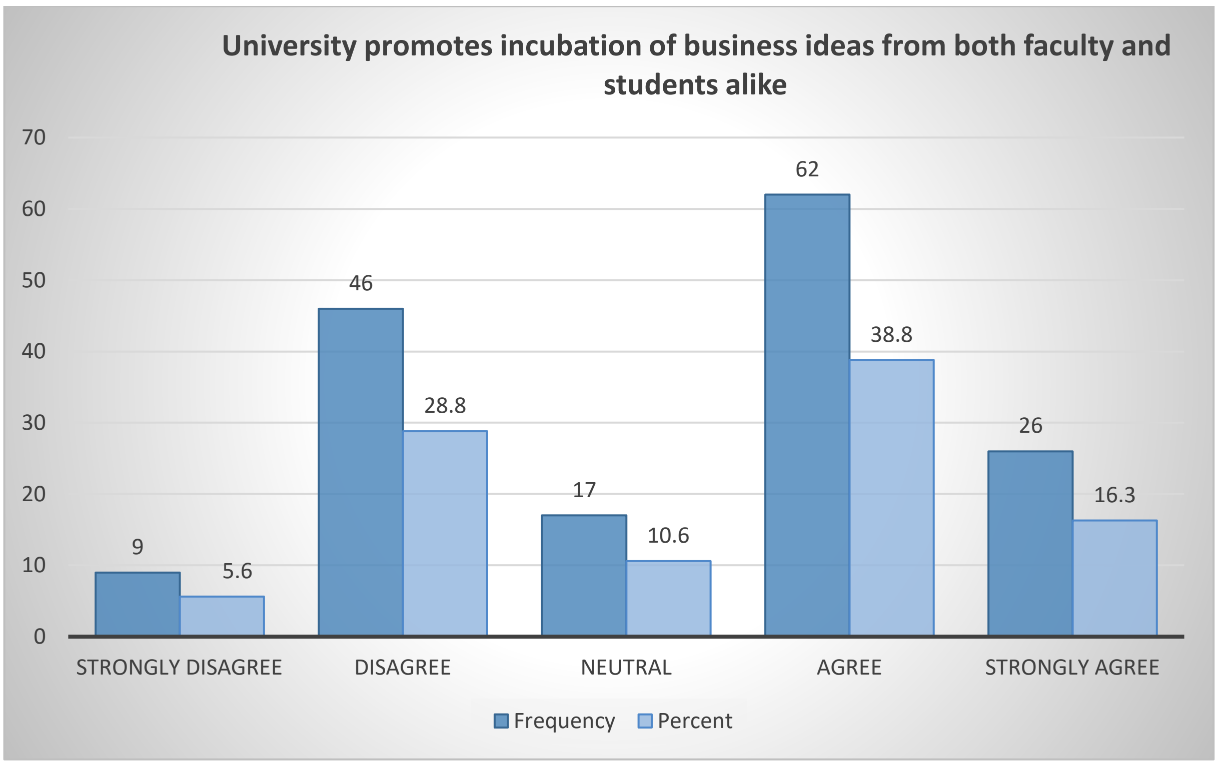

Figure 5.40: University promotes incubation of business ideas from both faculty and students alike

Table 5.46 and figure 5.40 show more than a third of respondents (62 or 38.8 percent) agreed, while 26 (16.3 percent) strongly agreed universities do promote the incubation of business ideas for both faculty and students alike. However, 17 (10.6 percent) respondents were neutral, 46 (28.8 percent) disagreed and nine (5.6 percent) strongly disagreed. Cumulatively, responses suggest the majority respondents are of the view universities do promote the incubation of business ideas for both faculty and students.

Entrepreneurship education is confirmed by Okudan and Rzasa (2006) and Bagheri and Pihie (2010) to be critical for company management, which indicates the need for its inclusion in the academic curriculum. In today's intense and dynamic competitive business climate, It is suggested TU leaders ought to possess entrepreneurial leadership traits and employ these in maintaining and improving themselves and their lifestyles (Karcioglu & Yucel 2004). This requires administrators to be entrepreneurial leaders, in order to ensure financial success and sustainability of the TUs.

Table 5.47: Universities offers opportunities to co-create shared value through business partnerships

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	12	7.5	7.5	7.5
	Disagree	62	38.8	38.8	46.3
	Neutral	26	16.3	16.3	62.5
	Agree	44	27.5	27.5	90.0
	Strongly Agree	16	10.0	10.0	100.0
	Total	160	100.0	100.0	

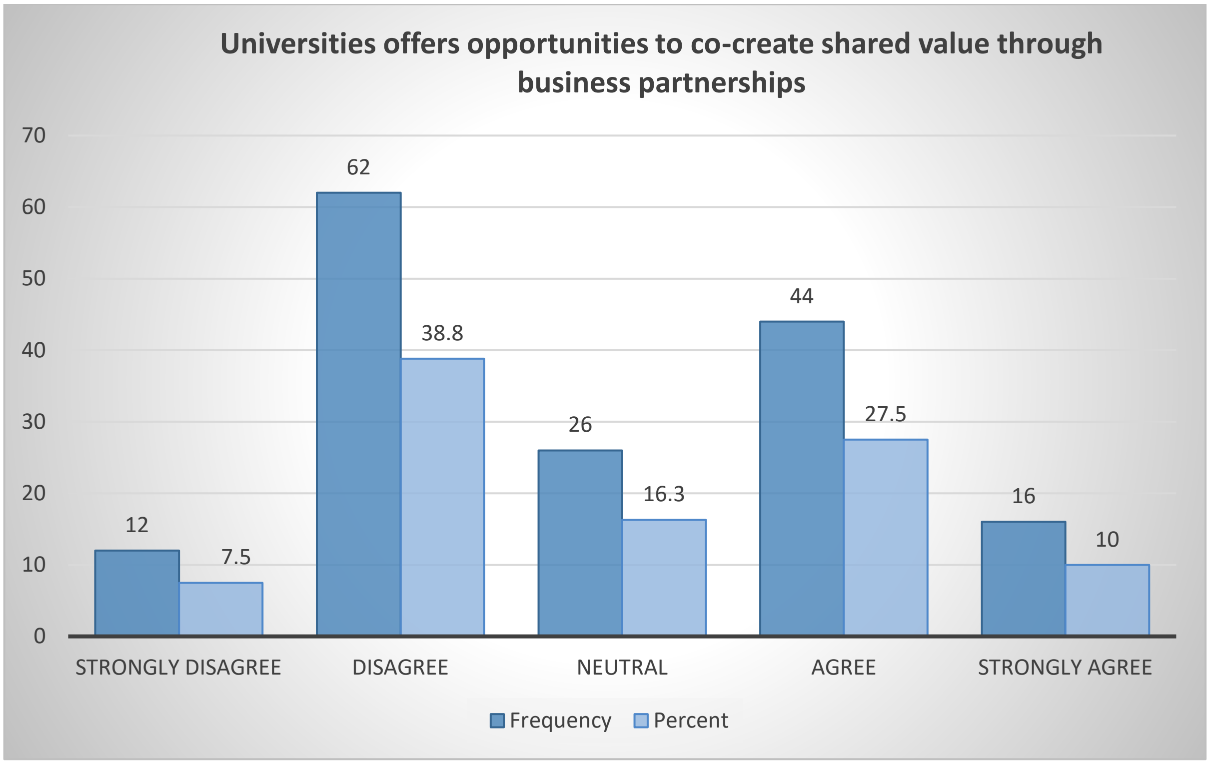

Figure 5.41: Universities offers opportunities to co-create shared value through business partnerships

The study delved into whether TUs offer opportunities to co-create shared values through business partnerships. As shown in Table 5.47 and figure 5.41, a moderate number of respondents (62 or 38.8 percent) disagreed, while 12 (7.5 percent) further strongly disagreed, suggesting universities do not offer opportunities to co-create shared value through business partnerships. With 30 (16.3 percent) respondents indicating neutral, 44 (27.5 percent) agreed and 16 (10 percent) strongly agreed. Cumulatively, responses suggest the majority respondents are in disagreement the universities offer opportunities to co-create shared value through business partnerships.

Component matrix: Role of Entrepreneurial Financial Leadership Governance

Table 5.48: Component Matrix[a]

	Component
	1
University leadership encourages entrepreneurship within community	.822
Adequate resources are committed to university entrepreneurship activities	.867

University provides opportunity for students gain work experience through business programs	.739
University promotes the incubation of business ideas both from faculty and students alike	.781
Universities offers opportunities to co-create shared value through business partnerships	.852

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

These components are a further statistical test performed on the above-mentioned figures (Figures 5.36–5.41). Analysis of responses revealed variables pertaining to the effects of Financial Governance on Growth of TUs loaded strongly on just one component, indicating a very strong significance. A component test was performed on the statement regarding the adequacy of resources being committed to university entrepreneurship activities, and a strong positive significance of 0.867 was obtained. In addition, a strong and positive significance of 0.852 was obtained for the statement, Universities offer opportunities to co-create shared value through business partnerships. For the significance of whether university leadership encourages entrepreneurship within community, a value of 0.822 was obtained. These variable loadings indicate respondents strongly believed all these factors loaded under this component are essential roles of Entrepreneurial Financial Leadership Governance.

THE FOLLOWING STATEMENTS ARE BASED ON THE EFFECT OF FINANCIAL GOVERNANCE ON GROWTH OF TECHNICAL UNIVERSITIES (TUs)

Table 5.49: The university employee size has increased

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	2.4	2.4	2.4
	Disagree	4	2.4	2.4	4.9
	Neutral	7	6.7	6.7	11.6
	Agree	83	50.6	50.6	62.2
	Strongly Agree	62	37.8	37.8	100.0
	Total	160	100.0	100.0	

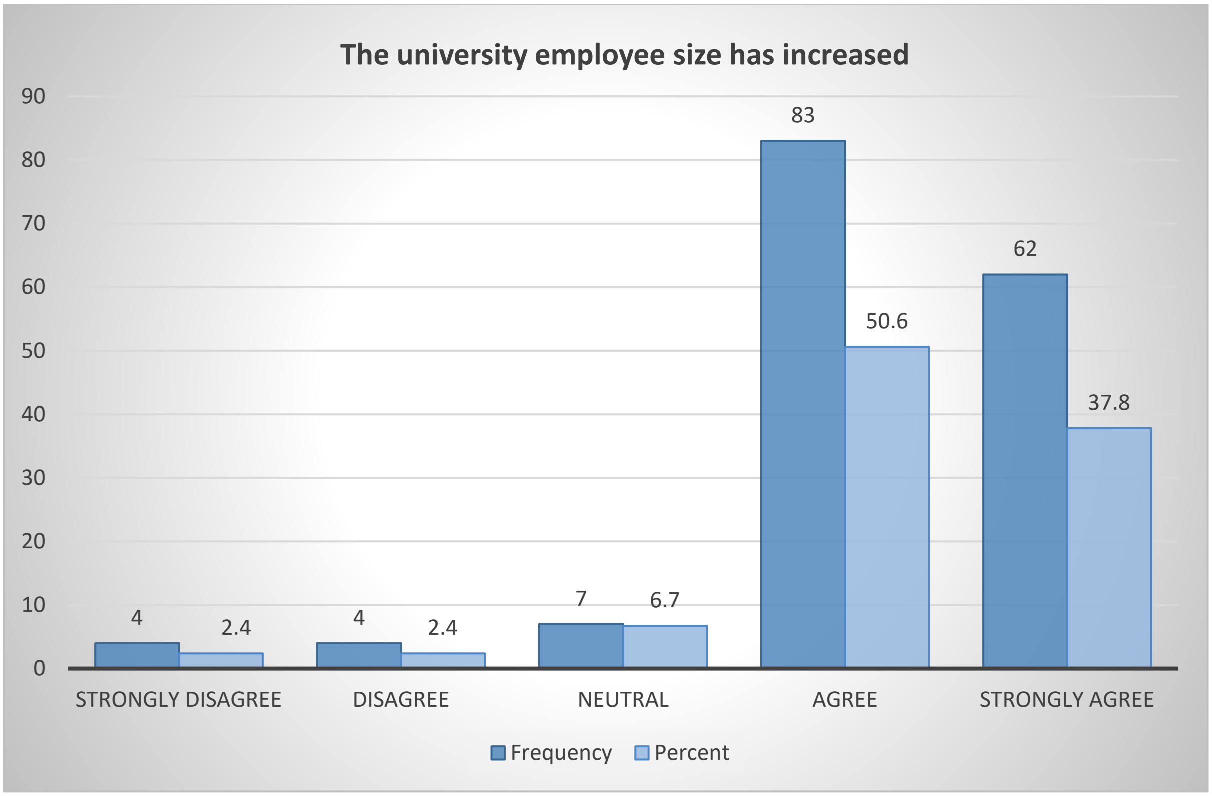

Figure 5.42: The university employee size has increased

On the issue of universities providing opportunities for students to gain work experience through their business programmes, table 5.49 and figure 5.42 revealed half the respondents (83 or 50.6 percent) agreed, while 62 (37.8 percent) further strongly agreed employee numbers of the universities have increased. A further seven (6.7 percent) were neutral, whereas four (2.4 percent) disagreed and four (2.4 percent) strongly disagreed. Cumulatively, responses suggest the majority respondents are of the view the number of employees has increased immensely.

Table 5.50: New programmes have been developed

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	4	2.4	2.4	2.4
	Disagree	7	4.3	4.3	6.7
	Neutral	6	6.1	6.1	12.8
	Agree	76	46.3	46.3	59.1
	Strongly Agree	67	40.9	40.9	100.0

	Total	160	100.0	100.0	

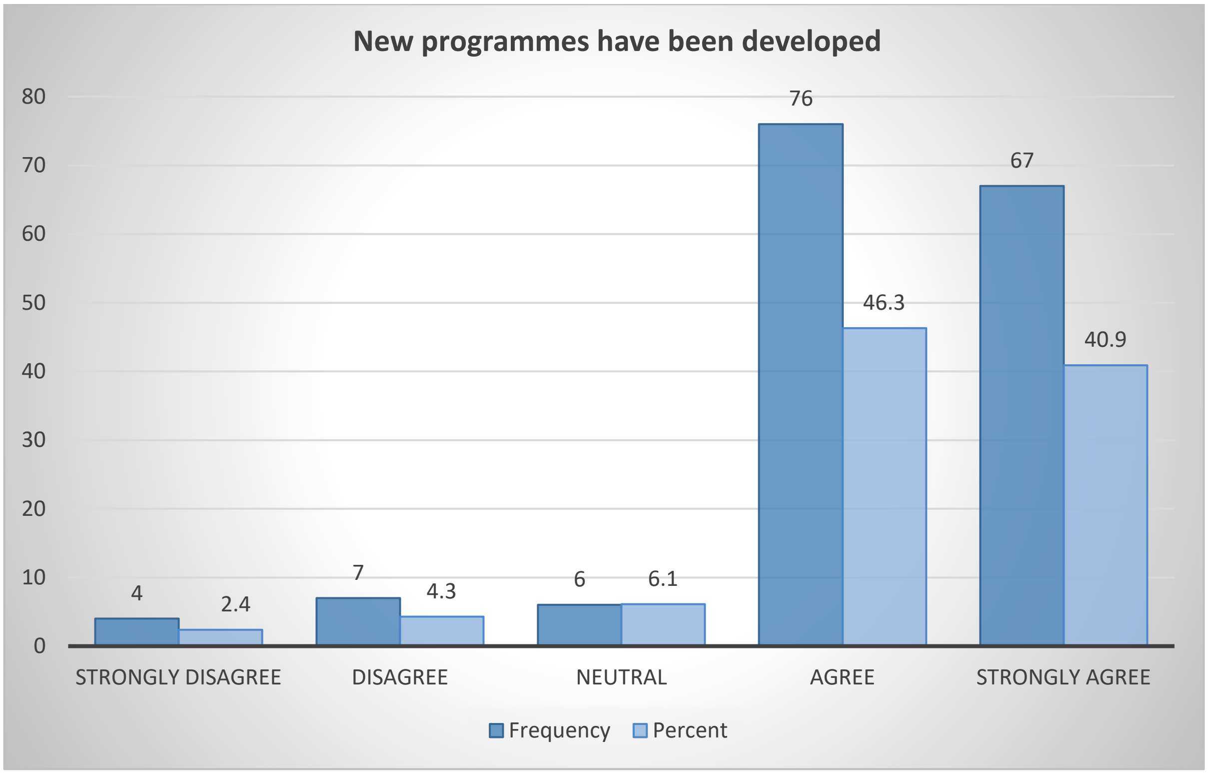

Figure 5.43: New programmes have been developed

Table 5.50 and figure 5.43 shows almost half the respondents (76 or 46.3 percent) agreed, while 67 (40.9 percent) respondents further strongly agreed new programmes have been developed. However, six (6.1 percent) were neutral, with seven (4.3 percent) respondents who disagreed and four (2.4 percent) strongly disagreed. This suggests the majority respondents are of the view new programmes have been developed.

Table 5.51: Increase in study centres

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	9	5.5	5.5	5.5
	Disagree	27	16.5	16.5	22.0
	Neutral	18	13.4	13.4	35.4
	Agree	56	34.1	34.1	69.5
	Strongly Agree	50	30.5	30.5	100.0
	Total	160	100.0	100.0	

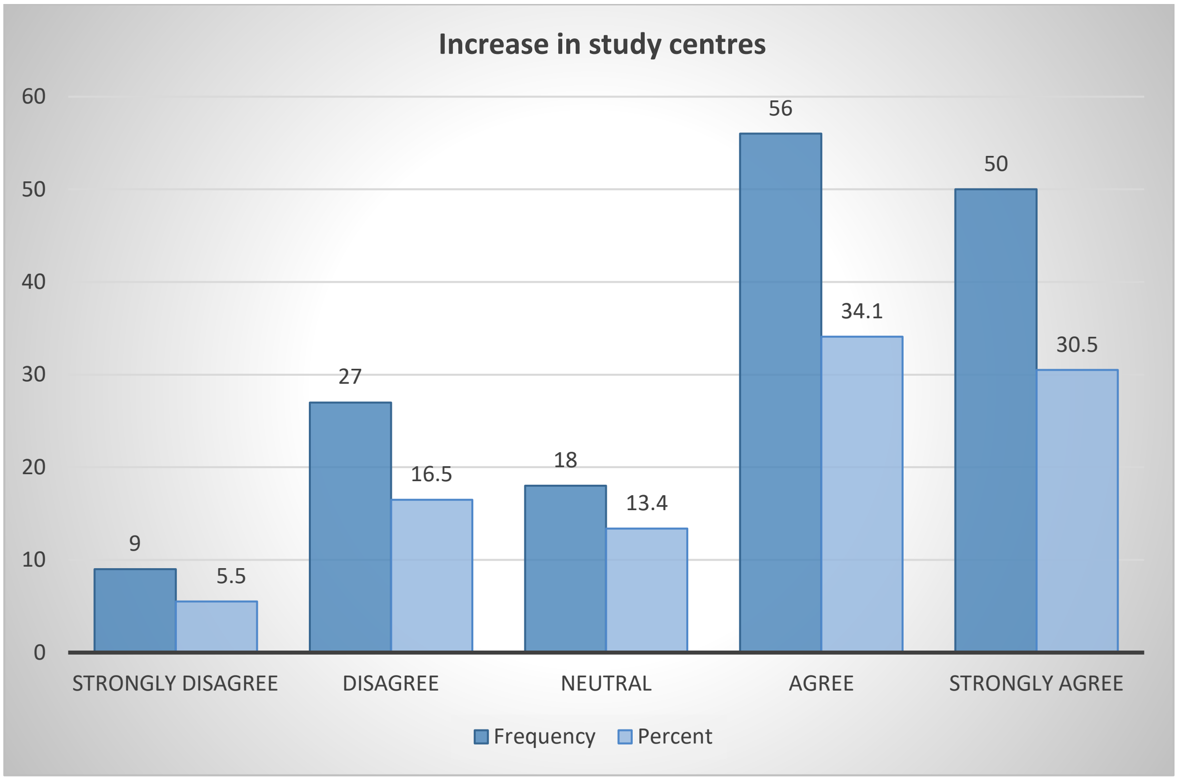

Figure 5.44: Increase in study centres

Table 5.51 and figure 5.44 illustrate respondent views on whether there has been an increase in study centres. A moderate number of respondents (56 or 34.1 percent) agreed, while 50 (30.5 percent) strongly agreed there has been an increase in study centres. However, 18 (13.4 percent) remained neutral, 27 (16.5 percent) disagreed and nine (5.5 percent) respondents strongly disagreed. This suggests the majority respondents believe there has been an increase in study centres.

Table 5.52: Increase in student capacity

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	Strongly Disagree	7	4.3	4.3	4.3
	Disagree	12	7.3	7.3	11.6
	Neutral	23	16.5	16.5	28.0
	Agree	69	42.1	42.1	70.1
	Strongly Agree	49	29.9	29.9	100.0
	Total	160	100.0	100.0	

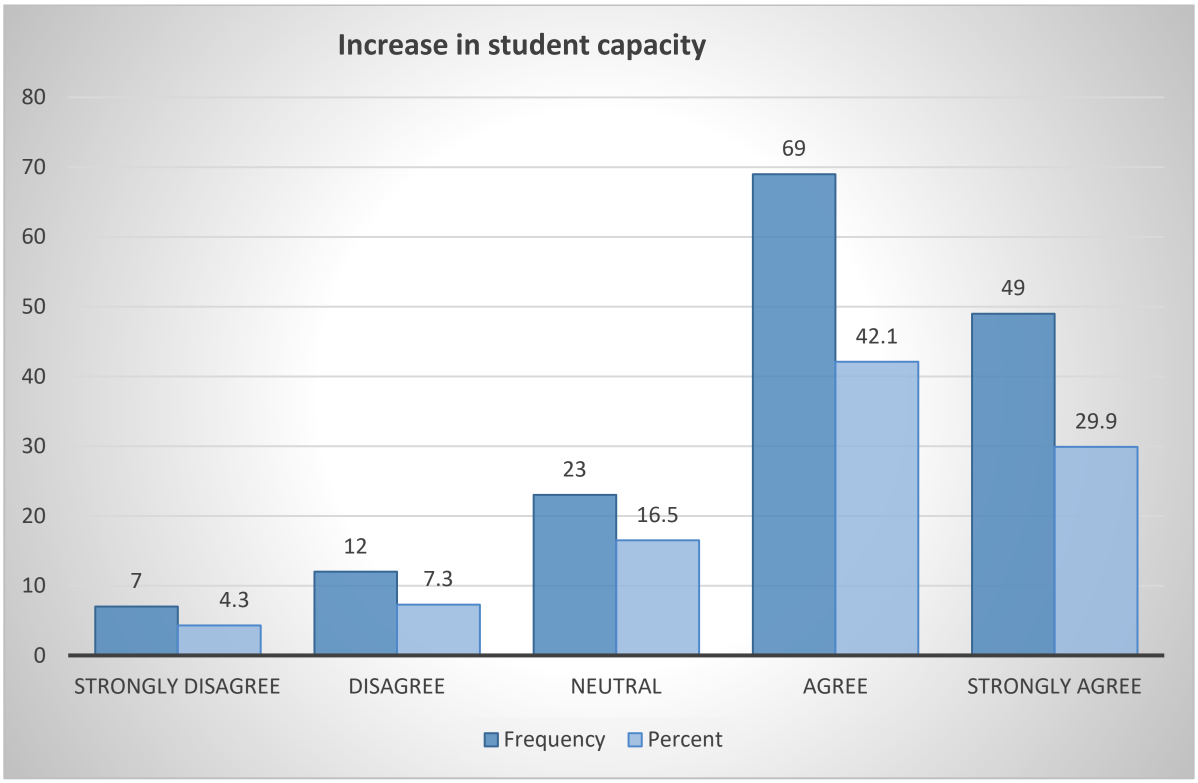

Figure 5.45: Increase in student capacity

The study delved into whether there has been an increase in student capacity. As shown in Table 5.52 and figure 5.45 a moderate number of respondents (69 or 42.1 percent) agreed, while 49 (29.9 percent) further strongly agreed, suggesting universities have had an increase in student capacity. In addition, 23 (16.5 percent) remained neutral, 12 (7.3 percent) disagreed and seven (4.3 percent) strongly disagreed with the claim. Cumulatively, responses suggest the majority respondents are in agreement universities have had an increase in terms of student capacity.

Table 5.53: Increase in strategic partnerships and collaborations with other

universities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	20	12.5	12.5	12.5
	Disagree	36	22.5	22.5	35.0
	Neutral	17	10.6	10.6	45.6
	Agree	50	31.3	31.3	76.9
	Strongly Agree	37	23.1	23.1	100.0
	Total	160	100.0	100.0	

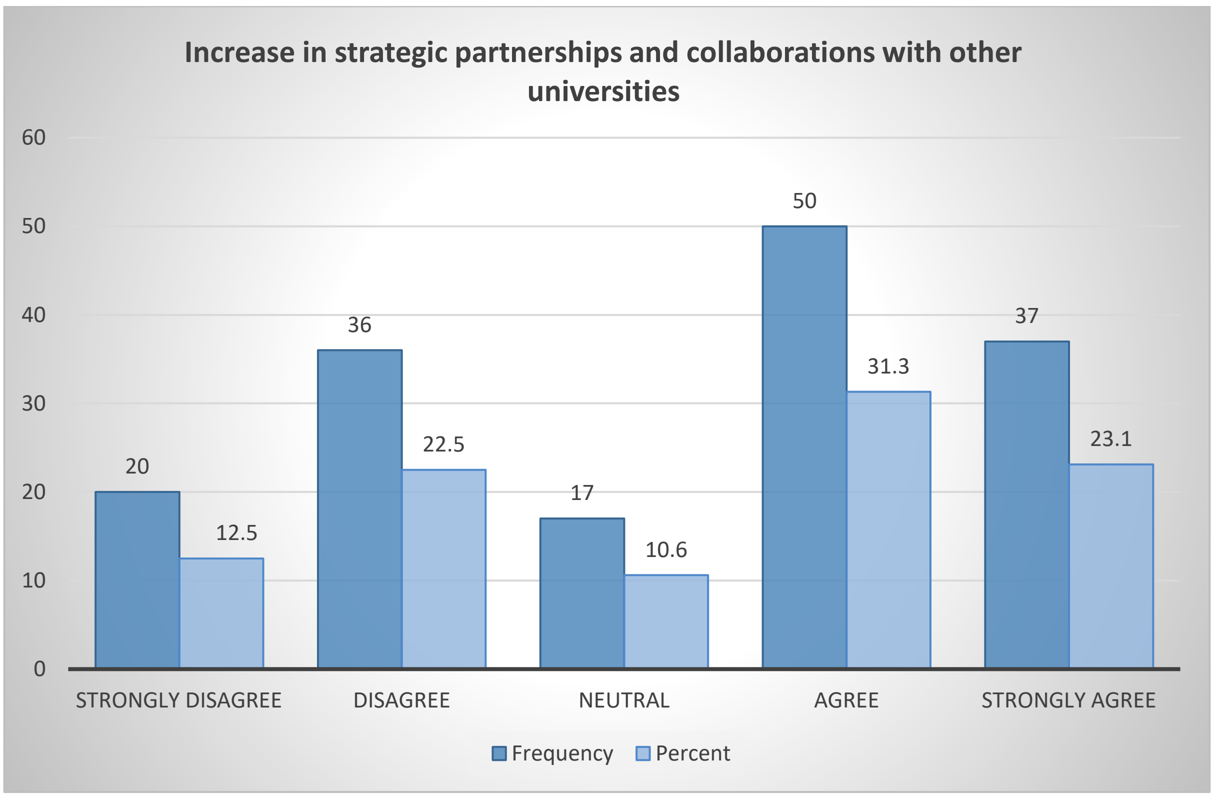

Figure 5.46: Increase in strategic partnerships and collaborations with other universities

Table 5.53 and figure 5.46 show the views of respondents whether strategic partnerships and collaborations with other universities have increased. A moderate number of respondents (50 or 31.3 percent) agreed, while 37 (23.1 percent) strongly agreed strategic partnerships and collaborations with other universities had increased. However, 17 (10.6 percent) were neutral, with a further 36 (22.5 percent) respondents who disagreed and 20

(12.5 percent) who strongly disagreed. This suggests the majority respondents believe there has been an increase in strategic partnerships and collaborations with other universities.

5.10 MULTIPLE LINEAR REGRESSION

A multiple linear regression was used to ascertain whether there is an effect of entrepreneurial financial governance and leadership on the overall growth of TUs. As shown in the Analysis of Variance (ANOVA) (Table 5.54), the significance of the regression model generated was tested. A significance value of 0.000 obtained further supposes the model obtained was good, meaning, entrepreneurial leadership and financial governance are significant variables in predicting the growth of the University. The coefficient table (Table 5.55) shows the significance of the independent variables (financial governance and entrepreneurial leadership) used to predict the growth of the University.

From the coefficient table (Table 5.57), the constant with a coefficient value of 2.177 returned significant, with a p-value of 0.000, which further suggests the constant should be featured in the model. Likewise, a p-value of 0.000 and a coefficient value of 0.229 for entrepreneurial leadership suggest it is significant and must be included in building a model to unearth the effect on growth. Lastly, for financial governance, a coefficient value of 0.263 and a p-value of 0.000 also suggest financial governance is significant and must be included in building a model.

Table 5.54: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	17.645	2	8.823	16.492	.000
Residual	86.129	161	.535		
Total	103.774	163			

a. Dependent Variable: Growth of Technical Universities

b. Predictors Constant), Entrepreneurial Leadership, Financial Governance

Table 5.55: Coefficients

Predictor	Estimate	Standardize Coefficients’	t	p
Constant	1.4413		6.608	0.000
Entrepreneurial Leadership	-0.0450	0.370	5.034	0.000
Financial Governance	0.1462	0.276	3.759	0.000

Dependent Variable: Growth of the University

Table 5.56: Collinearity Statistics of variables

	VIF	Tolerance
Entrepreneurial Leadership	2.99	0.334
Financial Governance	2.97	0.337

Table 5.56 presents results of collinearity statistics for the variables using a Variance Inflation factor (VIF) and tolerance. The VIF for all the independent variables are below 5.0 and tolerance values for the variables are more than 0.2, which implies there is no multicollinearity among the independent variables. According to Field (2009), a VIF more than five indicates multicollinearity, however, the tabled result indicates VIF is less than this, hence, there was no multicollinearity among the variables.

Table 5.57: Regression model for independent variables

Predictor	Estimate
Constant	2.177
Entrepreneurial Leadership	.229
Financial Governance	.263

Regression model: Equation formed considering unstandardised coefficients is Growth of the Technical Universities = 2.177 + 0.229 (Entrepreneurial Leadership) + 0.263 (Financial Governance)

Table 5.57 presents the result of the linear regression model of growth of the TUs and the independent variables, which are Entrepreneurial Leadership, and Financial Governance Practices. The constant of the regression model was 2.177; this indicates growth of the

TUs is held at a constant by entrepreneurial leadership, and financial governance practices. Therefore, as growth of the TUs increases, their entrepreneurial leadership increases by 0.229 percent, furthermore, as growth of the TUs increases, their financial governance practices increase by 2.63 percent.

5.10 QUALITATIVE ANALYSIS

After transcriptions were completed, the data were coded using NVIVO 12 software, with thematic network analysis used for the qualitative data, as suggested by Braun and Clark (2014), which allowed themes that consider the research problem to be generated from the resulting textual data. Qualitative analysis was performed in line with research objectives 4 and 5, respectively indicated below.

RO4: *What are the best practices of entrepreneurial financial governance strategies with the entrepreneurial financial governance strategies of the TUs in Ghana?*

RO5: *What improvement strategies can be used to enhance entrepreneurial financial governance strategies of the TUs in Ghana?*

The results were presented in the form of a word cloud (Figure 5.40) with a word frequency query applied (McNiff 2016; Richards 2002). The words that have been used the most and repeated in the thematic analysis are illustrated by means of word clouds (Zamawe 2015). In this study, thematic analyses show words most used to include: financial, entrepreneurship, governance, and entrepreneurial, in addition to universities, technical, strategies, and support, as well as resources, innovation, funding, and culture. The word size indicates its use frequency during the interviews conducted with the TU directors.

5.9.1 Word Cloud

Figure 5.47: Word Cloud

The word cloud is a visualisation method employed to depict textual data, in this case of the study as depicted in figure 5.47, wherein words are displayed in varying sizes, according to their respective frequencies. Word clouds are used by researchers in qualitative analysis, due to their ability to present a visually captivating and easily comprehensible summary of textual data. Word clouds are a valuable tool for emphasising significant textual material and efficiently conveying essential information. This tool is particularly valuable in examining data derived from social networking websites and streaming service platforms, to detect and analyse popular changes. Moreover, the use of word clouds can serve as a valuable tool in qualitative research data analysis, enabling researchers to discern obstacles and facilitators pertaining to specific programmes or fields of study (Padmanandam *et al*. 2021; Vilela, Ribeiro & Batista 2020). The sizes of word cloud fonts, which correspond to the frequency of words, can also impact the comprehension of meaning and the effectiveness of text analysis (Yang *et al*. 2019)

5.9.2 Mind Mapping

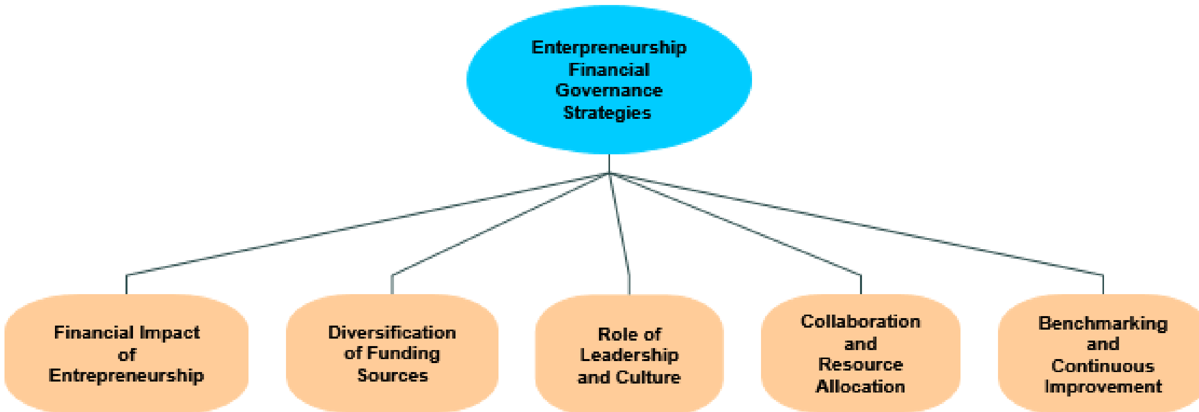

Figure 5.48: Mind Map of the study

Mind mapping is a technique used in qualitative research to organise and visually represent information. It is a non-linear approach that allows for freer data organisation, making it suitable for students with a visual approach to learning and those with learning disabilities (Sbaa *et al.* 2022). Mind maps are created by connecting ideas and concepts using keywords, images, and colours, reflecting the natural workings of the brain (Dayani, Abbas, & Ismail 2021). The use of mind maps in research helps to optimise the brain's potential and capacity for input, storage, and retrieval of information (Lubis, Nasution, & Kasmawati 2022). Overall, mind maps are used in qualitative research to enhance understanding, meaning, and learning by visually organising information and facilitating knowledge retrieval. The mind map consists of one main central theme (entrepreneurship financial governance strategies) and sub-themes that include financial impact of entrepreneurship, diversification of funding sources, role of leadership and culture, and collaboration and resource allocation, as well as benchmarking and continuous improvement.

5.9.3 Financial Impact of Entrepreneurship

Financial impact of entrepreneurship can be a strategy in financial governance in TUs in Ghana by focusing on sources of funding for business at the start-up and post-start-up stages of development (Antwi and Binfor 2013). This can include relying on personal savings, family-and-friend financing, and access to microcredit provided by the government (Kwarteng 2022). Additionally, implementing effective financial governance structures, such as corporate governance and financial disclosure, can positively impact the financial performance of banks in Ghana (Agyapong and Mordi 2020). These governance mechanisms include factors such as board size, board composition, timeliness of financial disclosure, and quality of auditors (Fiador 2013).

Implementing coherent IT governance mechanisms is also crucial for improving performance in the financial services sector in Ghana (Asmah and Kyobe 2023). Therefore, by adopting strategies that promote entrepreneurship and effective financial governance, TUs in Ghana can enhance their financial impact and overall performance. Below are the views of some respondents:

Director 001 for instance stated“

> "One of the key strategies I have implemented is the integration of entrepreneurship into our financial governance framework, and ’t's already showing promising results. It is significantly impacting the financial sustainability of our technical universities."

Additionally, Director 003 said“

> "I firmly believe that entrepreneurship plays a pivotal role in our financial governance approach. It not only fosters innovation but also encourages initiatives aimed at generating revenue within our technical universities."

Based on the assertions made by Directors 001 and 003, it can be deduced the incorporation of entrepreneurship into the financial governance structure of TUs is yielding favourable outcomes for their financial viability. Both directors place significant emphasis on the significance of entrepreneurship within their approach to financial governance.

Director 001 asserted the current strategy has exhibited encouraging outcomes, suggesting the integration of entrepreneurial principles is contributing to positive financial advancements. This implies the generation of money and the attainment of financial sustainability are intricately connected to entrepreneurial endeavours.

Director 003 emphasised entrepreneurship plays a crucial role in promoting innovation and stimulating revenue-generating endeavours within TUs. This implies the involvement of entrepreneurship in universities not only facilitates the generation of supplementary revenue, but also fosters a climate of innovation, hence, augmenting financial resilience. The statements indicate a commonly held conviction among directors that entrepreneurship plays a crucial role in fostering financial sustainability and promoting innovation within the financial governance policies of TUs. The effective incorporation of entrepreneurial activities seems to be exerting a favourable impact on their financial results.

5.9.4 Diversification of Funding Sources

Diversification of funding sources can be a strategy in financial governance in TUs in Ghana. By diversifying their funding sources, universities can reduce their reliance on a single source of funding and mitigate financial risks. This can be achieved by obtaining funding from various sources, such as internally generated funds, government support, international organizations, and external grants (Duho and Onumah 2019). Additionally, diversifying funding sources can provide universities with more financial flexibility and stability, allowing them to better handle their financial needs and support their operations (Ofori-Sasu, Abor, & Mensah 2019). According to Alu *et al.* (2014), it can also enable universities to invest in infrastructure, research, and development, crucial for the growth and progress of the institutions. By considering a diverse range of funding sources, TUs in Ghana can enhance their financial governance and ensure the sustainability of their operations. Below are the views of some respondents:

Director 002, for instance, stated:

> “As part of our financial entrepreneurial approach, we've been successful in diversifying our funding sources. This diversification has not only brought in funds from various avenues but has also significantly bolstered our institutional resilience. ’t's a testament to our commitment to innovation and sustainability.”

Similarly, Director 004 indicated:

> “Entrepreneurship has played a pivotal role in helping our technical universities in Ghana diversify their funding sources. We've moved beyond relying solely on

> traditional government funding, and this shift has been instrumental in ensuring financial sustainability and fostering innovation across our institution”."

The statements made by Directors 002 and 004 suggest the financial resilience and sustainability of TUs in Ghana have benefited significantly from diversifying financing sources through entrepreneurial activities. Both directors emphasise increasing financial resilience, sustainability, and a culture of innovation within TUs in Ghana have resulted from diversifying financing sources through entrepreneurial techniques. This departure from conventional funding sources is viewed as a wise move to safeguard the long-term viability of these organizations.

5.9.5 Role of Leadership and Culture

In financial governance of TUs in Ghana, the role of leadership can be a strategy for success. Furthermore, in order to sustain TU and industry public-private partnerships (PPPs), effective leadership is necessary (Addy and Adabor 2021). In this regard, Asante and Boakye (2019) highlight leadership qualities contribute significantly to PPP sustainability in TUs, with these attributes found to include negotiation skills, networking, planning, and monitoring. Additionally, top leadership has a significant influence on procurement management responsiveness, and it is important to address any negative influence to ensure professionalism and prevent fund misappropriations (Edwards, Raheem, & Dampson 2017). It is further noted strategic thinking and leadership are essential for the sustainable development of technical universities, and lessons can be learned from successful African institutions, in terms of excellence in scholarship, change in professionalism, specialisation, and entrepreneurship (Lawrings 2016; Dampson & Edwards 2019). Finally, the culture of the people in Ghana, which reflects positive and negative traits, can impact leadership and governance styles in technical universities. Below are the views of some respondents:

Director 005, for instance indicated:

> “The commitment of our university leadership to fostering an entrepreneurial culture has a profound impact on our financial governance strategies. It sets the tone for our institution's approach to resource allocation and ensures that entrepreneurship remains a core element of our financial decision-making

processes."

Director 006 also opined:

> “Leadership plays a crucial role in shaping our institutional culture, ultimately determining whether entrepreneurship becomes an integral part of our university's identity. Their vision and commitment inspire a culture that values innovation, risk-taking, and cross-disciplinary collaboration, all of which are essential for successful financial entrepreneurial governance strategies."

Director 007 maintained:

> "Universities prioritize entrepreneurship and allocate resources to incubation centres, innovation labs, and industry partnerships. These resource allocation policies directly reflect financial governance approaches that facilitate efficient use of resources."

It can be deduced from the statements by Directors 005, 006, and 007 that strong leadership and a dedication to promoting an entrepreneurial culture are crucial elements in forming the financial governance plans of TUs. Collectively, the statements imply TU financial governance techniques are highly influenced by leadership commitment to developing an entrepreneurial culture. Achieving the successful integration of entrepreneurship into financial governance requires strong leadership that sets institutional culture, prioritises entrepreneurship, and directs resource allocation.

5.9.6 Collaboration and Resource Allocation

Collaboration and resource allocation are important strategies in financial governance of TUs in Ghana. By collaborating with external partners through outsourcing arrangements, universities can deliver outstanding services and improve procurement performance (Newman 2013). This can be achieved through contracting, comprehensive outsourcing, licensing agreements, and selective outsourcing strategies, according to Prempeh, and Nsiah-Asare (2017). Nevertheless, collaboration also extends to the governance of natural resources, where institutions have evolved to include both informal and formal structures to enhance wildlife species viability (Yeboah-Assiamah, Muller, & Domfeh 2018).

In terms of resource allocation, Badoo, Hammond and Oppong (2020) emphasise the crucial role internal control systems play in ensuring the judicious utilisation and management of limited resources. Accra TU has implemented effective internal control systems, although there is a need to improve staff awareness and communication of internal control policies (Galvin Jr. and Sussman 2014). Overall, collaboration and resource allocation strategies contribute to the efficiency and sustainability of financial governance in TUs in Ghana. Below are the views of some respondents:

Director 007, for instance, said:

> “Through our entrepreneurial initiatives, technical universities are forging stronger bonds with local industries and startups. These collaborations are instrumental in fostering joint research projects, accelerating the commercialization of innovations, and creating shared investment opportunities, which significantly contribute to our financial entrepreneurial governance."

Director 003 also stated:

> “Collaboration with industries and external partners plays a pivotal role in introducing essential financial resources and expertise into our entrepreneurial financial governance strategy. These partnerships are a key driver behind our ability to fund entrepreneurial initiatives effectively.”

The comments by Directors 007 and 003 suggest working with regional businesses and other outside partners is an essential part of TUs’ financial entrepreneurial governance plan. Both claims highlight the significance of working together with businesses and other outside partners in the financial entrepreneurial governance initiatives of the TUs in Ghana. As a crucial part of the universities' overall financial sustainability and governance strategy, these alliances not only support innovation and research but also bring crucial financial resources and experience.

5.9.7 Benchmarking and Continuous Improvement

Benchmarking and continuous improvement can be effective strategies in financial governance in TUs in Ghana. By benchmarking, universities can compare their financial practices and performance with other institutions, both nationally and internationally, to identify areas for improvement and best practices (Badoo *et al*. 2020). This allows them, on the one hand, to learn from successful institutions and implement changes that can enhance their financial governance. Continuous improvement, on the other hand, involves regularly assessing and evaluating financial processes and systems, identifying areas of inefficiency or weakness, and implementing measures to address them (Lawrings 2017). This ensures financial governance practices are constantly evolving and adapting to changing circumstances, leading to more effective and efficient financial management in TUs.

By combining benchmarking and continuous improvement, TUs in Ghana can enhance their financial governance practices and contribute to the overall success and sustainability of their institutions. Below are the views of some respondents:

Director 007, for example, said:

> “Benchmarking of entrepreneurial financial governance strategies has proven instrumental for our technical universities. It enables us to identify and adopt best practices from institutions that have excelled in this realm. This process helps us refine and enhance our financial strategies to ensure they align with entrepreneurial goals and sustainability."

Director 008 asserted:

> “Benchmarking plays a crucial role in fostering a culture of continuous improvement within our technical universities. Regularly evaluating our financial governance strategies against benchmarks allows us to adapt, evolve, and stay aligned with emerging trends. It empowers us to address challenges effectively and ensure our financial strategies are always evolving to best support entrepreneurship and financial sustainability.”

It is clear from the comments made by Directors 007 and 008 that TUs can benefit from benchmarking entrepreneurial financial governance initiatives. Both assertions highlight the importance of benchmarking as a tool for studying successful institutions and continuously enhancing financial governance procedures. By following this procedure, TUs can maintain their competitiveness, adaptability, and alignment with their objectives of encouraging entrepreneurship and ensuring financial sustainability.

5.10 DISCUSSION OF KEY FINDINGS

In this section the key findings are discussed relative to the review of literature and the objectives of the research. As chapter two indicated, the study objectives are as follows:

Objective 1. To identify critical factors contributing to the entrepreneurial financial governance strategies of the TUs in Ghana.
Objective 2. To examine the reliability of entrepreneurial financial governance strategies on the TUs in Ghana.
Objective 3. To analyse the role of entrepreneurial financial leadership governance in the developing TUs dynamic capabilities in Ghana.
Objective 4. To benchmark best practices of entrepreneurial financial governance strategies with the entrepreneurial financial governance strategies of the TUs in Ghana.
Objective 5. To propose future strategies for improvement that could be employed to enhance entrepreneurial strategies financial governance of the TUs in Ghana.

In this section, a comprehensive overview is provided of the study's key empirical findings, as well as their comparison with the gathered literature. The basis of these discussions is the objectives of the research and the pertinent questions/ statements within the conducted survey.

The discussion that follows of the most important research findings is presented according to the study objectives as outlined:

5.10.1 Key Findings On Objective 1.

To identify critical factors contributing to the entrepreneurial financial governance strategies of the TUs in Ghana.

The literature provides a host of critical factors affecting financial governance strategies of the TUs in Ghana. For the purpose of this research study, these factors were classified into internal and external factors affecting financial governance of the TUs. The operating environment of the TUs is a basic factor that considerably influences strategies of financial governance. According to Eruemegbe (2015: 478), physical surroundings are not necessarily what is meant by the word "environment" , it instead, depicts all influences affecting the individual organization directly (Akpoviroro and Owotutu 2018: 500).

With regard to environmental factors, TUs have little or limited control over these issues, apart from taking them into account in their strategic planning (Kokemuller 2018). The financial governance and strategic objectives of TUs are affected due to these influences (Ibrahim and Primiana 2015: 289), as along with their continued and successful existence (Slitharam and Hoque 2016: 278). Environmental factors comprise several aspects, such as social, economic, cultural, and geographical, along with technological, political, legal and ecological factors (Saleem 2010: 03; Litavnience and Znotina 2015). Positive aspects must, therefore, be sought for financial governance that is effective within internal and external environments of the TUs (Xuhua *et al.* 2016: 40).

Integration of environmental factors, according to Ibigun and Ogundele (2013), must be done in a manner that permits building a strategy resulting in competitive advantage and earnings sufficient to enable improved performance (Ibrahim and Primiana 2015: 289). An adequate understanding of both internal and external environmental factors by TU leaders is important in enabling thriving institutions (Sherman 2018).

Adebayo *et al.* (2005) highlighted factors in the internal environment are those within the control of the firm, and subject to its manipulation, whereas factors outside its control are from the external environment. Existing within the operational base of an organization, the internal factors have a direct effect on different business aspects (Obasan 2014: 165).

5.10.1.1 Internal Factors Affecting Financial Governance Strategies

Right Management Competence

Of the respondents, 83.2 percent strongly agreed right management competence affects financial governance. Management competencies are confirmed in a study by Lopa and Bose (2014: 11) to affect the firm’s long-term performance. However, a study by Veliu and Manzhari (2017: 64) determined relationships between different independent managerial competencies positively impacted business performance. This shows the competence of management to have a fundamental function in financial governance (Yahya and Elsayed 2012: 132), making it important for the TU managers to comprehend changes accompanying and effected by business environment changes, such as required competencies (Taipale-Erävala 2015: 20).

By implication, TU management needs to identify the competencies that will enable achieving effective financial governance objectives. Therefore, the TUs need to be aware of the significance of management competencies as contributors to financial growth and success, and to understand the nature, role and impact such competencies will have on innovation and sustainable growth (Sánchez 2011: 241).

Ineffective Internal Auditing

A moderate number of respondents (54.4 percent) agreed ineffective internal auditing is a major factor affecting financial governance. Wallek (2016) confirmed Internal audit is critical to the attainment of objectives as one of the internal control components in organizations, with various stakeholder expectations regarding the IA responsibilities and roles in the prevention of fraud cases and fund embezzlement, which creates a gap regarding expectations, due to insufficient independence and competent staff. Where the institution of Internal Audit Units is concerned in Ghanaian TUs, the expectation is the enhancement of organizational efficiency, fewer scandals, embezzlement of public funds and corruption. Nevertheless, there are an alarming rate of continued instances of financial irregularities in the TUs.

As revealed by the 2020 AG Report on the accounts of the TUs in Ghana, financial irregularities and financial infractions including fraud cases went up by "60 percent in 2017, 17 percent in 2018, 73 percent in 2019 and 82 percent in 2020" (AG 2020: 3). This shows the independence of TU IAs is impaired and they cannot, therefore, perform their expected independent responsibilities. The IA role in the public sector, in particular, has developed both in its extent and impact, as several studies have shown (Spira & Page 2003; Abbey 2010; Gros *et al.* 2016)

Lack of Financial Management Skills

More than half (60.7 percent) the respondents believed the lack of financial management skill influences financial governance and could affect financial governance strategies of the TUs. Effectively, this insinuates most respondents are of the view the lack of financial management skills affects financial governance.

In other words, when a financial management skill set is lacking within the TUs, it will impact entrepreneurial financial governance. According to Syed Kutnjak *et al*. (2019), financial reporting skills are found in those who work to ensure financially responsibility of an organization to its stakeholders, which includes their energies, skills, talents, and knowledge. One of the criteria that ascertain system effectiveness, as echoed by Ismael *et al*. (2021), is to employ people that are suitably qualified and have the skill set required to man the right position. Gardi (2021) highlights, to gain a competitive advantage, added value must be delivered by management using business techniques. In addition, Sorguli and Al-Kake (2020) assert universities should remain dedicated to appropriately managing their human capital, in order to achieve their financial objectives and goals, thus improving their financial governance system effectiveness.

Inadequacy of Professional Capacity

Many (61.3 percent) respondents agreed inadequacy of professional capacity can affect financial governance. As outlined in the professional practice of the IPPF international standards (IIA 2016), "professional proficiency" denotes the knowledge needed, along with the skills and other professional competencies required from auditors and accountants to fulfil their responsibilities successfully and effectively. In particular, audit and finance staff experience, has an important effect on the role played and quality of work delivered (AlTwairy *et al.* 2003; Vu 2016; Yu *et al.* 2019). Lack of quality HR and finance capacity in the area, as well as insufficient knowledge of appropriate technology that is widespread, result in an inadequate financial governance system (De Mauro *et al*. 2018).

The annual reports of most organizations annual reports refer to employees as the greatest assets of the company (Saleh *et al*. 2021). Furthermore, with competitive advantage gained through management employing business techniques to generate added value (Gardi 2021), the argument by Sorguli and Al-Kake (2020) for commitment to proper human capital management by universities, is motivated by financial objective and goal achievement, which will increase their financial governance system's efficacy.

Lack of Technological Skills

Agreement was indicated by 63.7 percent respondents regarding whether the lack of technological know-how can have dire consequences on the financial governance of the TUs. This means, when the organization lacks the skills and resources with respect to technology, it does affect their growth and financial governance. Any comprehensively thorough financial reporting aims to work more quickly, accurately and efficiently through the use of the power of technology. According to Sutevski (2019), technical skills are not only related to the ability to use machines, IT, production tools and various types of business equipment, but are also crucial to the design of strategic business approaches, using different accounting software to manage business books, and to create different kinds of products. A lack of technical skills will affect the TU's ability to co-ordinate and manage critical business books and financial reporting.

The inability to use technology has impeded the financial reporting skills of most public sector workers in TUs in Ghana.

Financial Irregularities

It was agreed by 66.3 percent respondents when there are financial irregularities within an organization, it influences financial governance. As revealed by the 2020 AG Report on the accounts of TUs in Ghana (AG 2020: 3), continued increases in financial irregularities and financial infractions, including cases of fraud, rose from "60 percent in 2017, to 17 percent in 2018, followed by a further 73 and 82 percent respectively, in 2019 and 2020". An example stated by the AG Report of Ghana on accounts of TUs for 2019, was the embezzlement from Koforidua TU of GHS 620 457.32/ $1348 82.23, attributed to ineffective internal control systems to safeguard the university's financial resources (AG 2019). The funds were diverted to a private account from school fees that had supposedly been collected (Adomonline 2022: 15 February).

Lack of Innovation and Learning

The results show 60 percent respondents believed the lack of innovation and learning in organizations has the tendency to affect financial governance. Organizational capacity is described by Camilleri (2021), as sustainable professionalism and innovation development. Furthermore, employees at institutions of higher learning, such as the TUs, must be able to think independently, be creative, innovative and able to learn (Ortiz *et al*. 2019), where it was found by Aly and Mansour (2017) that an association exists between innovation and learning and continuous improvement and value creation.

5.10.1.2 External Factors Affecting Financial Governance In TUs

The external environment is explained by Wahyuni *et al.* (2016: 46) and Ayandibu and Houghton (2017: 58) to include all events a company cannot control, because they take place external to the organisation (for example, competition, training, financing and technology). Nevertheless, they can potentially affect company operations, productivity, and innovation. Innovation, as explained by Fagerberg *et al.* (2006), is heavily reliant on resources that are external, with these, in turn, affecting enterprise behaviour and performance (Voiculet *et al.* 2010: 02). Not only do these assets include financial or human resources, they also comprise linkages with other firms and institutions, and connections with public resources, as well as foreign behaviour (Shi and Wu 2016: 04).

Political factors

External political factors were agreed by 68.1 percent respondents to have dire consequences on TU financial governance. The results show the majority respondents believe external political influence does affect the financial governance of an institution. In other words, high rates of external political influence on the organization negatively affect their growth and financial governance. Indris and Primiana (2015) posit stability of the political situation influences company choice regarding where in the market and how they will compete (Indris and Primiana 2015). TUs therefore, need to recognise trends in politics as policy changes can impact the legal framework of the universities. As highlighted by Ingram *et al.* (2017), any form of political variability affects market conditions, which has an effect on government aid and backing to TUs (Stimpson and Smith 2015: 71**)**.

Economic Factors

With regard to economic factors, 71.3 percent respondents agreed entrepreneurial financial governance strategies of the TUs in Ghana are affected by these factors. This confirms the belief of the potentially positive effect financial stability has on financial governance strategies (Akbar 2017; Apriliana & Agustina 2017; Irwandi, Ghozali, and Pamungkas 2019). Economic factors, as Nichter (2009b) explained, comprise those that have a bearing on changes in various costs, including production, product prices, rates for wage, and interest rates, in addition to inflation. Gachuhi (2016) states these factors shape the way a business generates profits, losses, or growth.

As outlined in the Auditing Standards Statement (SAS) No. 99, when operations of the company create an unstable financial situation, management will be pressurised through economic and industrial conditions of the company. Therefore, to enable stakeholders to have trust in their financial governance, TUs must have exceptional financial stability, as pragmatic people who are entrepreneurial advance economic progress, because they are innovative, take advantage of opportunities, and are risk-takers (Hisrich 2005).

Limit of state Regulation

Responses show a significant number of respondents believed financial governance is affected by the limit of state regulations. This is represented by 64.4 agreeing to the claim. The financial governance system of the TUs in Ghana is highly regulated by laws, such as Article 187 (2) of the 1992 Constitution, the Financial Management Act, 2016 (Act 921), Public Financial Management Regulations 2019 (L.I. 2378), and the Public Procurement Act, 2003 (Act 663), as well as the Public Procurement (Amendment Act, 2016 (Act 914), Income Tax Act, 2015 (Act 896), and Value Added Tax Act, 2013 (Act 870). In addition, non-compliance with these financial regulations and systems are major challenges faced by TUs in Ghana, with regard to financial governance. Universities are shown to be faced with the challenge in remaining financially stable, subsequently practicing various financial strategies in an attempt to address the challenge (Wangenge-Ouma and Carpentier 2018; Cloete *et al.* 2016; Lourens 2016)

Lack of Infrastructure affecting Entrepreneurial Financial Governance Strategies

A substantial number of respondents (63.3 percent) agreed the lack of infrastructure has a significant influence on financial governance. Afriyie (2015) asserted financial governance strategies are measured by the availability of resources, containment of rapidly rising costs of offering academic activities, research, and guaranteeing surpluses for future investments in academic activities and research. This concurs with Ehler (2014: 01), who indicated the “lack of good infrastructure that is accessible and well-functioning, acts as a severe hindrance to economic development” of organisations.

Competition among TUs

A moderate number (57.9 percent) of respondents agreed competition among TUs affects financial governance of the institution. General responses proved the majority respondents believe competition among TUs affects entrepreneurial financial governance in the TUs. This means competition is also an immense threat for TU growth and survival; nonetheless, Soini and Veseli (2011: 50) assert the main factor in achieving economic growth is often competition, as firms are motivated and impelled to be more productive in being competitive. Competitors are a significant influence in the external environment, because other firms’ products, prices and services cannot be controlled by competing firms (Beach 2017). According to Porter (1985), competitive advantage measures the success of a firm proportionate to its competitors. Essentially, consumers are offered greater value through competitive advantage by decreased product or service costing or with services or products that feature improved quality, therefore, justifying higher prices (Pickard-Whitehead 2018)

Inadequate Budgetary Allocation

The majority respondents (57.9 percent) agreed to the statement that inadequate budgetary allocations affect the financial governance of the TUs. Generally, most respondents believe when budgetary allocations are inadequate in the TUs, it affects their financial governance. This further suggests when there is inadequate allocation of funds to support entrepreneurial activities and businesses, it has an effect on the growth of the organization. This concurs with Ogunode and Abubakar (2021) and Ogunode (2020), in asserting inadequate budgetary allocation is a political and economic decision that affects TU financial governance strategies, leads to insufficient funds in the system, which creates excessive strain on funds generated internally. The AG of Ghana reported that, over the years budgetary allocations to TUs amount to roughly 44 percent, with the TUs having to use internally generated revenues to fund the approximately 66 percent budgetary gap (AG 2017, 2018, 2019, 2020). Diminishing financial apportionment to TUs in the budgets of several government departments is an essential aspect that affects financial governance of these institutions in Ghana.

Ineffective Financial Monitoring Systems

Agreement was indicated by 69.5 percent respondents that ineffective financial monitoring systems affect financial governance of the TUs in Ghana. The study shows the majority respondents agreed ineffective financial monitory systems affect financial governance. Mukyala *et al*. (2017) affirm accountability failures indicate weak monitoring of activities in any local government. On the one hand, insufficient/inadequate monitoring of TU financial and operating activities in Ghana are cited as the cause of numerous financial infractions and irregularities (AG 2018: 7, and 2020: 6). On the other hand, excessive rule and procedure monitoring is a challenge to decision-making, as noted by Ferry *et al.* (2015). Nevertheless, financial monitoring in Kenyan public institutions of higher learning impacts their financial performance in a positive and significant way (Kisanyanya and Omagwa 2018).

Lack of Dynamic Capabilities to venture into Academic Entrepreneurship

It is believed by 59.7 percent respondents that lack of dynamic capabilities to venture into academic entrepreneurship affects entrepreneurial financial governance strategies. This, however, proves the majority respondents support that when there are no opportunities for organizations to venture into academic entrepreneurship, it has the tendency to affect the organization's financial governance. This affirms findings by Delke (2015), who indicated the growing turbulence and uncertainty in the environment of modern organizations has an impact on universities. As a result, studies have been conducted across the globe in Australia, Canada, China, and the Netherlands, as well as Singapore, Germany, and the USA, to identify entrepreneurial universities.

In describing dynamic capabilities, it includes the ability of the firm to integrate internal and external competencies, while also building and reconfiguring them to deal with environments that are rapidly changing (Akinyemi 2012; Jackson 2011). The key point here is, for organizations to remain viable, managers who face VUCA business environments cannot merely be capable administrators; resourcefulness is required. Organizational effectiveness is equally, or holds more importance, than the efficiency of operations. To ensure effectiveness, organizational leaders must be able to distinguish opportunities and deal with threats. These entrepreneurial characteristics should be part of a senior leadership team, particularly where the present VUCA environment is concerned. Furthermore, it entails the transformation of the University in order that it may remain resilient and in alignment with its ecosystem (Goleman 2000; Helfat *et al.* 2007; Adeniji 2015).

This necessitates the management of or "orchestrating" the resources in an enterprise or institution to deal with and influence external environments that are rapidly changing (Helfat *et al.* 2007). Essentially, the framework of dynamic capabilities uses a system-level approach to management of an organization or institution (Gulbrandsen, & Smeby 2005; Helfat *et al*. 2007).

Lack of Technology to remain abreast of Financial Governance strategies

Agreement was indicated by 65.2 percent respondents that technology not being up-to-date with financial governance strategies affects these strategies. This proves the majority respondents are in favour of an organization being well-informed regarding technological know-how, which in turn, leads to effective and efficient financial governance strategies. Bhatt and Bhatt (2017), Ducassy and Guyot (2017) and Pillai and Al–Malkawi (2018) confirmed public sector entities adopting IT on a national level, is basically crucial to financial governance development and survival, which impacts not only firm competitiveness but also financial performance. This concurs with Ghobakhloo *et al.* (2012: 58) who highlighted the need for investing significant financial resources in IT, in order to improve competitive position (Premkumar 2003; Clibanu and Neamtu 2017).

5.10.2 Key findings on Objective 2

To examine the reliability of entrepreneurial financial governance strategies on the TUs in Ghana.

Risk is identified, monitored, and communicated to those charged with financial governance

Only 31.1 percent respondents agreed risks are identified, monitored, and communicated to those charged with financial governance within the TUs in Ghana, however, Yakob *et al*. (2019), indicated that the process of risk identification helps businesses to know the kind of risk they are exposed to or likely to be exposed to Ferreira *et al*. (2019), also indicated that, Risk Managers must identify the sources of risks their company is exposed to, so they may properly manage the risk. Strategies such as brainstorming, interviews, cause and effect analysis, as well as flowchart analysis can be employed by TU management to identify areas of possible deviations or departure from plans or goals as a result of risk factors. Thus, the TUs must specify suitable objectives to identify and analyses risk, while also managing significant changes likely to affect their financial governance.

Development of Strategic alliances with other businesses towards its entrepreneurial drive

Analysis of responses revealed 50.3 percent respondents agreed there is development of a strategic alliance with other businesses by the TUs towards its entrepreneurial drive. This contrasts with Akinyemi (2012), who indicated academic entrepreneurship has expanded further than mere teaching and research, thereby ensuring a university is able to accomplish its core functions better in the direct search for new funds, using off-campus collaboration with organizations external to the institution. The funding of HE is shown to have become a prominent concern, particularly where North American and United Kingdom (UK) public universities are concerned. Further to this, enrolments that are relatively flat or declining in some universities must be dealt with (Ahmad *et al*. 2012). A more visible manifestation of improved efforts in fundraising, is where credit is increasingly bestowed on wealthy donors have for their financial “gifts”, with the naming of university facilities, schools and research centres featuring these donors (Jackson 2011). There has been an increase in the number of donor named medical schools from 15 to 26 during the last 20 years (Helfat *et al.* 2007).

Some examples of this practice include: in 2015, the public health school at Harvard was renamed to the T.H. Chan School of Public Health, as reward for the record-setting $350 million gift from this billionaire; in 2017, in recognition of a $125 million gift from a hedge fund magnate, the economics department of the University of Chicago was renamed the Kenneth C. Griffin Department of Economics; in 2010, the medical school of the University of California, Los Angeles, was renamed to the David W. Geffen School of Medicine, to recognise the entertainment industry mogul’s gift of $200 million; while in 2008, the renaming of the University of Chicago Business School resulted in a change to the Booth School of Business, as acknowledgement to entrepreneur David Booth (Bailey 2016) for his $300 million gift. In other words, the TUs in Ghana need to think and act in a more innovative way, while also being entrepreneurial, and “bootstrap” their way forward, making best use of existing resources while seeking alternative income streams.

5.10.3 Key findings on objective 3

To analyse the role of entrepreneurial financial leadership governance in developing TUs dynamic capabilities in Ghana.

Essential investments in the physical, human and technological infrastructure

More than half (58.7 percent) the respondents believe essential investments in the physical, human and technological infrastructure will enhance entrepreneurial financial governance strategies of the TUs. The need for firms to invest significant financial resources in IT is confirmed by Ghobakhloo *et al.* (2012: 58), which the authors indicate could strengthen a firm’s competitive position (Premkumar 2003; Clibanu and Neamtu

2017). Several authors concur (Bhatt & Bhatt 2017; Ducassy & Guyot 2017; Pillai & Al–Malkawi 2018) IT adoption on a national level by public sector entities, including TUs, is vital to financial governance development and survival of these government sectors, as this affects their competitiveness and how they perform financially.

The TUs, in their pursuit of technological innovation, face severe challenges (Gnyawali and Park 2009: 308; Farsi and Toghraee 2014: 01). Opiyo (2017) confirms this, asserting the failure of most reforms can be attributed to human ability and not to reform programme content or technical aspects. Included in the factor range is limited financial resources, limited technical skills capacity of entrepreneurs, as well as age, and insufficient training opportunities (Elbeltagi, Al Sharji and Hardaker 2013; Jafarnejad et al. 2013; Kumar *et al*. 2008; Kusumaningtyas and Suwarto 2015).

As highlighted in the Xero Report (2017), notwithstanding the expense in the adoption of technology, the importance of its benefits and innovation and sustainable growth significance are paramount. Firm success by means of rapid technology adoption was determined to be substantially improved (Eke *et al.* 2015: 08). The TUs need "awareness in terms of strategy, processes, technology, and applications, in addition to the skills" necessary in the strategic planning and coordination of their transformation processes (Kapurubandara 2009: 20). At present, financial governance strategies of TUs are critically affected by the lack of technological advancement; ICT use in specific.

Technical universities promote entrepreneurial culture

The study delved into whether TUs promote an entrepreneurial culture within the university setting, with 49.4 percent respondents agreed the TUs promote an entrepreneurial culture. In growing and teaching entrepreneurship, an innovation and risk-taking culture is needed and this can be fostered through effective leadership, training, and incentives (McKenny *et al*. 2018). Examining the benefits, it is found an entrepreneurial orientation is able to foster an environment conducive to creative problem-solving, which will enable businesses to stay ahead of their competition by developing new solutions to prevalent problems (McGee & Peterson 2019). An entrepreneurial leadership can, furthermore, aid businesses in quickly adapting to fluctuating conditions in the market, as well as demands from consumers. In this way they can be assisted to stay competitive in an environment that is fast-changing (Hernández-Linares & López-

Fernández 2018). Similarly, businesses can use entrepreneurial culture to maximise profits through cost cutting, thereby increasing sales, which is possible when new opportunities are identified and exploited and innovative solutions developed (Covin *et al*. 2020).

There is management support for entrepreneurial business activities in the universities
Disagreement was indicated by 50.1 percent respondents that university management does not provide support for entrepreneurial business activities. This suggests the majority respondents believed management support for entrepreneurial business activities from the TUs is not forthcoming. However, Shaheen *et al.* (2020) and Braun and Clarke (2014) indicated the focus by entrepreneurial leadership is on the vision and goals of the organization, its innovations, flexibility, and creativity, as well as its fervour, propensity to take risks, and existing resources of outside institutions. It was proposed organizations institute university leadership training, thus providing them with traits of entrepreneurial leadership that will enable the universities to achieve their intended goals.

University promotes incubation of business ideas both from faculty and students alike
Almost half (55.1 percent) the respondents believe the TUs promote the incubation of business ideas for both faculty and students alike. Consequently, throughout the world hundreds of institutions at present offer a variety of entrepreneurial programmes, with these ranging between electives or minor programmes and complete academic degrees (Guerrero *et al*. 2016). It has also been shown by a large body of research that taking part in entrepreneurship education and programmes offered by business, increases the desire by students to create their own enterprises (Anwar & Saleem 2019; Boldureanu *et al*. 2020).

The intention of learners regarding entrepreneurship can also impact the academic discipline of a student, because of the knowledge and skills impact in running the business. Education is shown to potentially increase, reinvigorate, and improve entrepreneurial intentions, according to evidence from within and outside of academia. It is through the skills of leadership and management which entrepreneurial programmes teach that students are able to develop an entrepreneurial mindset, while also gaining improved understanding of business administration and the hope of starting their own businesses (Hahn *et al*. 2017). It was concluded by Cui *et al.* (2019) that entrepreneurial orientation, entrepreneurship training, and activities that are extracurricular may all impact the propensity of students to take risks and use their own initiatives. Furthermore, it was determined by Ozaralli and Rivenburgh (2016) that a significant relationship exists among several factors of personality, for instance, optimism, innovation, ability for risk-taking and entrepreneurial intention.

5.10.4 Key findings on objective 4

Objective 4. *To benchmark best practices of entrepreneurial financial governance strategies with the entrepreneurial financial governance strategies of the TUs in Ghana.*
A word cloud was developed to represent the results, with a word frequency query applied (McNiff, 2016; Richards, 2002); through thematic analysis the words most used and repeated are highlighted (Zamawe 2015). Thematic analyses of this study show several words, such as: financial, entrepreneurship, governance, and entrepreneurial, as well as universities, technical, strategies, and support, along with resources, innovation, funding, and culture, were the most used. The size of the word shows how frequently it occurred during the TU director interviews.

Based on the assertions made by Directors 001 and 003, it can be deduced entrepreneurship incorporation into the financial governance structure of TUs is yielding favourable outcomes for their financial viability. Both directors place significant emphasis on the worth entrepreneurship has in their financial governance approach.

Director 001 asserts the current strategy has exhibited encouraging outcomes, suggesting the integration of entrepreneurial principles is contributing to positive financial advancements. This implies there is a complex connection between revenue generation and financial sustainability attainment and entrepreneurial endeavours.

Director 003 emphasises entrepreneurship plays a crucial role in promoting innovation and stimulating revenue-generating endeavours within TUs.

Overall, collaboration and resource allocation strategies contribute to the efficiency and sustainability of financial governance in TUs in Ghana.

Director 007, for instance, stated:

> “Through our entrepreneurial initiatives, technical universities are forging stronger

> bonds with local industries and startups. These collaborations are instrumental in fostering joint research projects, accelerating the commercialization of innovations, and creating shared investment opportunities, which significantly contribute to our financial entrepreneurial governance."

Director 003 added:

> "Collaboration with industries and external partners plays a pivotal role in introducing essential financial resources and expertise into our entrepreneurial financial governance strategy. These partnerships are a key driver behind our ability to fund entrepreneurial initiatives effectively."

The comments made by Directors 007 and 003 suggest working with businesses and other outside partners is an essential part of the TUs' financial entrepreneurial governance plan. Both claims highlight the significance of working together with businesses and other outside partners in TUs' financial entrepreneurial governance initiatives. As an essential aspect of the overall financial sustainability and governance strategy of the universities, these alliances support innovation and research, while also contributing financial resources and experience that are crucial.

By combining benchmarking and continuous improvement, TUs in Ghana can enhance their financial governance practices and contribute to the overall success and sustainability of their institutions.

For instance, Director 007 said:

> "Benchmarking of entrepreneurial financial governance strategies has proven instrumental for our technical universities. It enables us to identify and adopt best practices from institutions that have excelled in this realm. This process helps us refine and enhance our financial strategies to ensure they align with entrepreneurial goals and sustainability."

Director 008 asserted:

> "Benchmarking plays a crucial role in fostering a culture of continuous improvement within our technical universities. Regularly evaluating our financial governance strategies against benchmarks allows us to adapt, evolve, and stay

> aligned with emerging trends. It empowers us to address challenges effectively and ensure our financial strategies are always evolving to best support entrepreneurship and financial sustainability."

It is clear from the comments made by Directors 007 and 008 that TUs can benefit from benchmarking entrepreneurial financial governance initiatives. Both assertions highlight the importance of benchmarking as a tool for studying successful institutions and continuously enhancing financial governance procedures. By following this procedure, TUs can maintain their competitiveness, adaptability, and alignment with their objectives of encouraging entrepreneurship and ensuring financial sustainability.

CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

The main research was to identify critical factors that contribute to strategies for entrepreneurial financial governance of Ghanaian TUs. A rich foundation of secondary data was provided through a comprehensive literature search, while primary data were gained through administrating a questionnaire and interview guide. This chapter offers conclusions, presented as a summary of key findings, with evidence of having achieved the objectives of the research. In addition, a discussion of the hypotheses in relation to the study findings is presented, with the limitations applicable to the study highlighted, as well as providing and explaining recommendations that are linked to the study findings and for further study.

6.2 SUMMARY OF THE KEY FINDINGS

The primary aim of the research sought identification of critical factors that add to strategies in Ghanaian TUs regarding entrepreneurial financial governance and propose improvement strategies to enhance revenue generation of the TUs in Ghana. The following conclusions can be drawn, based on the findings:

Respondents identified right management competence and financial irregularities as the most significant internal factors affecting entrepreneurial financial governance strategies of the TUs, with 83.2 percent responses indicating right management competence affects financial governance of the TUs. The results further indicated 66.3 percent respondents believed financial irregularities are a major contributing factor affecting entrepreneurial financial governance strategies of the TUs in Ghana.

These findings indicate, in order for the TUs to have effective entrepreneurial financial governance strategies, there should be right management competence on key business development areas and field-related knowledge to help minimise financial irregularities. Considering the high prevalence of financial irregularities cases in the TUs in Ghana, such as those cited by the AG of Ghana, effective internal control implementation in the TUs is paramount.

According to the study findings, ineffective internal controls were also considered a key factor affecting entrepreneurial financial governance of the TUs internally. Moreover, 64.4 percent respondents indicated ineffective internal controls affect the entrepreneurial financial governance strategy and putting internal controls into practice is, therefore, crucial in ensuring effective financial governance in the TUs in Ghana. This becomes a basic framework implementation of operational activities. Internal control policies effectively implemented and adhered to, will motivate the introduction of values by the TUs, by way of innovations, entrepreneurialism, advancement, and operating in a way that is transparent and accountable.

The respondents are of the view a lack of technical skills and innovation affect entrepreneurial financial governance strategies Thus, the findings demonstrate technical skills play a critical role in TU activities and in innovation, more specifically. These skills can be critical, particularly when dealing with entrepreneurial financial governance operations and innovation strategies, as indicated by 63 and 60 percent respondents respectively. These skills enable TU leaders to identify, challenge and overcome difficult situations and problems that might arise in the universities. It is, therefore, important for the technological skills and innovation gap issue be addressed.

The TUs need to identify and strengthen their technical capabilities leading to innovation, which will support them in any strategic transformation of the university and assist in managing business innovation and financial growth.

In terms of external environmental factors, 71 percent respondents believed the issue of economic factors has a significant impact on financial governance strategies, whereas 68.1 percent respondents felt political factors contribute to financial governance strategies of the TUs in Ghana.

Respondents identified two external environmental factors as major contributors to entrepreneurial financial governance strategies; ineffective financial monitoring systems by the government and lack of Infrastructure. Whereas 69.5 percent respondents believed financial governance strategies are influenced by lack of financial monitoring systems, 63.3 percent confirmed infrastructure impacts financial governance strategies of the TUs. Additionally, 71.3 percent were of the opinion economic factors contribute to entrepreneurial financial governance.

On the issue of the limit of state regulation and lack of budgetary allocation, 64.4 percent and 57.9 percent respectively indicated such external factors influence TU financial governance strategies. According to the literature review, the success of business activity depends on environmental factors such as social, economic, legal, and political, along with technological aspects that influence activities, thus leading to, a successful financial governance strategy (Yachmeneva 2014; Khan 2014).

Careful and accurate analysis of the external environment can benefit the TUs, providing greater understanding and an appreciation of the context in which the TUs operate. These factors can, therefore, create opportunities or threats for TUs and this can enhance or threaten financial resource value, turning these into competitive disadvantage/advantage. Moreover, the respondents believed the lack of dynamic capabilities and technology negatively affect entrepreneurial financial governance strategies. In addition, 59.7 percent and 65.2 percent respondents respectively indicated these two factors contribute to entrepreneurial financial governance strategies.

Respondents further believed lack of dynamic capabilities and insufficient technology negatively affect entrepreneurial financial governance strategies. In this regard, 59.7 and 65.2 percent respondents, respectively, indicated these two factors contribute to entrepreneurial financial governance strategies. The growing turbulence and uncertainty in the financial sector in Ghana, coupled with the government domestic debt exchange programme has an impact-on the financial resources of universities. As a result, the TUs need to identify entrepreneurial financial governance strategies to integrate, build, and reconfigure internal and external competencies to address the rapidly changing environments.

More importantly, the TUs are challenged by a VUCA business environment, thus simply being proficient administrators is not an option in maintaining viable financial governance strategies. TU leaders need to, therefore, identify opportunities and manage threats. In today's VUCA environment, these senior leadership team entrepreneurial traits are a necessity, requiring TUs to transform in order to remain supportive of their ecosystem and resilient.

Only 31.1 percent respondents agreed risks are identified, monitored and communicated to those charge with financial governance, within the TUs in Ghana. In addition, 34.4 percent agreed there is critical evaluation of financial options for TU business projects and 31.1 percent respondents agreed there is entrepreneurial financial planning for all business undertakings by the TUs. These findings suggest the entrepreneurial financial governance strategies used over the years by the TUs in Ghana have not been reliable.

Planning of entrepreneurial programmes and activities, critical evaluation of projects and risk identification help the TUs to better comprehend the kind of risk they are likely to be exposed to. Key officers of the TUs must, therefore, identify the sources of potential risks, so they may be properly managed. Strategies TU management can employ include brainstorming, interviews, cause-and-effect, as well as flowchart analysis, to identify those areas risk factors may cause to possibly deviate or depart from plans or goals. Thus, the TUs must specify suitable objectives to identify and analyse risk, while also managing significant changes likely to affect their financial governance.

Agreement was indicated by 58.7 percent respondents who believe essential investments in the physical, human and technological infrastructure will enhance entrepreneurial financial governance strategies of the TUs, with 49.4 percent respondents of the opinion the TUs promote an entrepreneurial culture. A review of related entrepreneurship literature shows a culture of innovation and risk-taking is required, encourage by means of good leadership, instruction, and incentives.

An environment of creative problem solving can be nurtured through entrepreneurial culture, allowing the development of new solutions by the TUs to existing problems, so they may remain ahead of competition. TUs can be assisted through an entrepreneurial culture to quickly adapt to fluctuating conditions in the market and demands from consumers, as this can help them remain competitive in a continuously changing and fast-paced environment, while also helping to make the most of their revenue with cost cutting and increased sales. To achieve this, new opportunities must be identified and exploited, while innovative solutions are developed.

Just more than half (50.1 percent) the respondents indicated university management do not provide support for entrepreneurial business activities. This suggests the majority respondents believed management support for entrepreneurial business activities of the

TUs is not forthcoming. There are several aspects entrepreneurial leadership focuses on, including the vision and goals, innovations, resilience, and creativity, as well as enthusiasm, risk-taking, and potential resources of existing outside institutions. Organizations are advised to establish university leadership training sessions that will equip them with the needed qualities of entrepreneurial leadership, allowing universities to realise intended goals.

The majority (55.1 percent) respondents believe the TUs do promote business idea incubation for both faculty and students alike. The responses suggest most respondents are of the view universities do promote the incubation of business ideas for both faculty and students. A large body of research shows students will be motivated through entrepreneurship education participation and aided by business programmes to start their own businesses, Moreover, evidence from within and outside academia shows increased business idea incubation from both faculty and students, with entrepreneurial intentions reinvigorated and improved.

6.3 CONCLUSIONS

The conclusions are set out according to the study objectives.

6.3.1 Conclusions regarding research objectives

The section that follows offers an overview of the study conclusions, aligned to its research objectives, where the basis of these conclusions lies in the empirical findings and its statistical analysis, as well as the tested hypotheses. Those variables that were tested are discussed below, based on the questionnaire (Appendix A), which were formulated according to a comprehensive review of the literature and the objectives of the research. In order to collect this primary data, dissemination of the questionnaire was achieved by means of an electronic link that could be accessed by the target population. The analysed data show various critical factors that impact Ghanaian TUs' financial governance strategies, a challenge with the reliability of financial governance strategy and the lack of dynamic capabilities in adapting to the changing financial governance environment. The findings suggest the proposed improvement strategies are required to ensure effective entrepreneurial financial governance strategies in promoting sustainable financial growth and innovation; these can be designed, applied and used for the benefit of the TUs.

Objective 1. To identify critical factors contributing to the entrepreneurial financial governance strategies of the TUs in Ghana.

It is concluded entrepreneurial financial governance strategies are affected by both internal and external environmental factors. The internal factors contributing to entrepreneurial financial governance strategies include right management competence, lack of financial reporting skills, ineffective internal auditing, and financial irregularities, as well as lack of innovation learning, and inadequate professional capacity. The study also revealed the external factors contributing to entrepreneurial financial governance strategies include political and economic factors, limits of state regulation, competition among the TUs, and inadequate budgetary allocation, along with ineffective financial monitoring systems and lack of dynamic capabilities. The study concludes key officers and policy of the TUs in Ghana should pay particular attention to the above critical factors and address them.

Objective 2. To examine the reliability of entrepreneurial financial governance strategies on the TUs in Ghana.

The study concludes, even though the TUs in Ghana have made some effort to ensure the reliability of financial governance strategies, by critically evaluating projects, planning for all entrepreneurial business the university enters into, and identification of risk and communication of such risk to those charged with financial governance; however, they have been found to be less successful in addressing the reliability of entrepreneurial financial governance strategies. This is reflected in the responses, where less than half the participants indicate the TUs ensure reliability of the entrepreneurial financial governance strategies. Therefore, key policy makers urgently need to ensure entrepreneurial planning and comprehensive enterprise risk management practices are incorporated in their financial governance strategies.

Objective 3. To analyse the role of entrepreneurial financial leadership governance in the developing TUs' dynamic capabilities in Ghana.

The study concludes essential investments in the physical, human and technological infrastructure, promotion of entrepreneurial culture, management support for entrepreneurial business activities in the universities, and promotion of business idea incubation, from both faculty and students alike, are the critical roles TU leadership should play to ensure entrepreneurial financial governance strategies are effective. Nevertheless, it seems these roles have been relaxed over the years by TU management, thereby, affecting their entrepreneurial financial governance strategies negatively. The study concludes business incubation system and intentions, promotion of entrepreneurial culture, and management support, therefore, have a positive relationship with entrepreneurial financial governance strategies used by the TUs.

Objective 4. To benchmark best practices of entrepreneurial financial governance strategies with the entrepreneurial financial governance strategies of the TUs in Ghana.

Benchmarking and continuous improvement can be effective strategies in financial governance in TUs in Ghana. By benchmarking, universities can compare their financial practices and performance with other institutions, both nationally and internationally, to identify areas for improvement and best practices (Badoo *et al*. 2020). This allows them to, on the hand, learn from successful institutions and implement changes that can enhance their financial governance. Continuous improvement, on the other hand, involves regularly assessing and evaluating financial processes and systems, identifying areas of inefficiency or weakness, and implementing measures to address them (Lawrings 2017).

TUs in Ghana could make use of funding source diversification as a strategy in financial governance, thus, reducing their dependence on a single funding source and decreasing financial risks. This can be achieved, according to Duho and Onumah (2019), with funding obtained from various sources, including funds that are internally generated, support from the government, international organizations, and external grants. In expanding and adapting varying sources of funding, universities could gain added financial flexibility and stability, facilitating improved management of financial needs and operational support (Ofori-Sasu *et al*. 2019). The leadership role in financial governance of TUs in Ghana can be a strategy for success. Effective leadership is necessary to sustain PPPs between TUs and industry in Ghana (Addy and Adabor 2021). Leadership qualities such as negotiation skills, networking, planning, and monitoring significantly contribute to the sustainability of PPPs in TUs (Asante & Boakye 2019). Top leadership, furthermore, significantly influences responsiveness in procurement management, which requires any negative influence to be dealt with, ensuring professionalism and preventing misappropriation of funds (Edwards *et al*. 2017).

6.4 IMPLICATION OF ENTREPRENEURSHIP INNOVATION THEORY

The basis of the study lies in Entrepreneurship Innovation Theory, which states that distinct traits are exhibited by entrepreneurs, who participate in activities seen as entrepreneurial. These activities, as highlighted by Schumpeter (1934), are made up of risk-taking, opportunity identification, resource mobilising, and nurturing innovation, in addition to the effective creation and capitalising on new prospects. As this theory states, the role of innovation is to serve as a basic incentive for economic development and growth. This emphasises that the role played by entrepreneurs is crucial with regard to the introduction of novel products, processes, or business models, which produce value, encourage demand in the market, and drive economic advancement (Valdez-Juárez, García-Pérez de Lema, and Maldonado-Guzmán 2016).

Entrepreneurship Innovation Theory is of significant relevance to TU financial growth in Ghana and should, therefore, be heavily reliant on innovation in driving entrepreneurial financial governance and growth. The theory of Entrepreneurship Innovation emphasises the role of entrepreneurs in the introduction of new products, processes, or business models, through which value is created and generated in the market. This translates into the development of innovative revenue in the TUs, by adapting to complex changing technological environment (Demirel & Mazzucato 2012). By investing in R&D, the TUs can discover and commercialise new business ventures that address unmet needs of the community within which the university operates, and expand their entrepreneurial business portfolios.

The significance of entrepreneurial behaviour is highlighted by the theory of Entrepreneurship Innovation in new market exploration and expansion of business reach. Entrepreneurial companies actively look for opportunities to enter into partnerships with the TUs, as well as form strategic alliances with the institutions, and for sustainable financial growth to be established (Caseiro & Coelho 2018). In adjusting to these unique requirements, TUs can draw on previously untapped entrepreneurial financial strategies, and create added streams of revenue. Entrepreneurial strategies can, by means of innovative strategies, result in substantial financial growth of the TUs in Ghana

6.5 CONCLUSION ON RESEARCH HYPOTHESES

RELATIONSHIP BETWEEN FINANCIAL GOVERNANCE PRACTICES AND THE GROWTH OF TUs

H_0: There is no significant relationship between financial governance practices and growth of TUs.
H_1: There is a positive significant relationship between financial governance practices and growth of TUs.

In ascertaining the relationship between financial governance practices and the overall growth of TUs, Pearson's correlation coefficient and significance was used. The study revealed Pearson's Correlation coefficient = 0.693 ($p = 0.03$), which shows a fairly strong and significant relationship between the financial governance and growth of the University. Therefore, when TUs focus on implementing strong and effective financial governance strategies, it goes a long way to promote their growth and financial sustainability

RELATIONSHIP BETWEEN ENTREPRENEURIAL LEADERSHIP AND THE GROWTH OF TUs

H_0: There is no significant relationship between entrepreneurial leadership and growth of TUs.
H_2: There is a positive significant relationship between entrepreneurial leadership practices and growth of TUs.

As obtained from the study (Pearson's Correlation coefficient = 0.516, $p = 0.01$), with respect to the strength, the coefficient of 0.516 suggests a moderate relationship between the variables under discussion. In addition, a significant value of 0.01 suggests the relationship between entrepreneurial leadership and growth is significant. This further suggests when the various leaders in the TUs have the relevant entrepreneurial skills, their work ethics will propel and foster growth within the TU community.

RELATIONSHIP BETWEEN INTERNAL GOVERNANCE FACTORS AND THE GROWTH OF TUs

H_0: There is no significant relationship between internal governance practices and growth of TUs.

H_{3A}: There is a positive significant relationship between internal governance practices and growth of TUs.

As obtained from the study (Pearson's Correlation coefficient = 0.479, p = 0.02), with respect to the strength, a coefficient of 0.479 suggests a weak relationship exists among the variables under discussion. Furthermore, a significant value of 0.02 suggests the relationship between internal governance practices and growth is significant. This further suggests when there are well-defined and effective internal governance practices in universities, although weak, it has a significant effect on the overall growth of the University.

RELATIONSHIP BETWEEN EXTERNAL GOVERNANCE FACTORS AND THE GROWTH OF TUs

H_0: There is no significant relationship between external governance practices and growth of TUs.

H_{3B}: There is a positive significant relationship between external governance practices and growth of TUs.

In ascertaining the relationship between external governance practices and the overall growth of TUs, a Pearson's correlation coefficient and significance was used. The study revealed (Pearson's Correlation coefficient = 0.893, p = 0.01) a fairly strong and significant relationship between the external governance practices and growth of the University. In other words, when the TUs are able to identify and manage external factors associated with the financial governance of the universities, it ensures the growth of the university.

In conclusion, the hypothesis test preformed revealed, with exception of internal factors affecting entrepreneurial financial governance strategies, all other variables tested had a strong causative effect on the growth of the University. Therefore, the findings suggest financial governance practices, entrepreneurial leadership and external governance factors all contribute significantly to the growth of the Universities. Although, while internal governance factors returned significant results in the effect on growth, the study suggest its relationship or effect on growth is weak.

6.6 IMPLICATIONS OF THE STUDY

The study implication is to add to the existing knowledge regarding entrepreneurial financial governance strategies in HE, specifically the TUs in Ghana. The strategies currently used do not promote reliability and efficient financial governance that promote financial growth and sustainability. This research, therefore, enlightens stakeholders on the critical factors affecting entrepreneurial financial governance strategies in institutions of higher learning, such as TUs in Ghana, by providing a firm basis upon which stakeholders can place confidence in the TUs' financial governance strategies, by generating efficient and effective strategies. One of the most important issues that colleges and universities face today is achieving successful financial viability, by broadening revenue sources. Challenges encountered by universities include rising operating costs, as well as being dependent on traditional student tuition, support from the government, and philanthropy. Moreover, TUs must now make use of income diversification to augment funding shortfalls resulting from diminishing public monies (Agrawall and Henderson, 2002; Adeniji, 2015).

6.7 RECOMMENDATIONS

Right Management Competence

The findings of the study revealed one internal factor affecting financial governance strategies of the TUs is right management competence. It is recommended the TUs invest in HR capacity through training and continuous professional development of management staff, to enable them to acquire entrepreneurial skills for the promotion of right management competence. This can be attributed to professional development providing skills to assist management in maintaining and enhancing the required knowledge and skills to perform their jobs, which should also positively enhance the influence of staff on financial governance.

Financial Reporting Skills

The findings of the study indicate a lack of financial reporting skills impacts entrepreneurial financial governance. Skills and training are a prerequisite for both internal audit and finance staff to achieve innovation and financial growth. The study, therefore, recommends TUs start investing in staff capabilities through cost effective training and workshops, particularly those the Institute of Chartered Accountants organises, which should be arranged and made available to employees. This should improve staff financial reporting skills and allow for new innovative strategies from staff.

Regulation policy re-evaluation

Based on the findings of the study, limits imposed by state regulations has had a negative impact on entrepreneurial financial governance strategies of the TUs in Ghana. Therefore, it is recommended:

- Government regulation policy makers should review and reconsider government regulations and determination of tuition fees paid by students of the TUs, specifically the limit through which the legislative arms of government restrain the various TUs from charging tuition fees. This will promote appropriate financial governance strategies and sustainable financial growth of the TUs.
- Government budgetary allocation continues to be out of reach for most TUs. For instance, according to the AG Report of Ghana (2018), government subventions to the TUs over the year have increased marginally, whereas the total expenditure emanating from employee compensation, the use of goods and services, and the consumption of fixed assets have increased exponentially, resulting in an unfavourable fiscal balance for most TUs in Ghana. The government needs to thus find a better system of providing financial support for TUs to achieve their aim of providing quality education.

Financial Monitoring Systems

Periodic monitoring and evaluation of business policies is needed in order to determine whether TUs are able to cope. This will strengthen ongoing efforts to build a less concentrated, more competitive, economic and manufacturing structure, in which barriers to entry for new entrants are lowered across key sectors of the economy. One aspect the government could eliminate, is business registration fees and taxes, which new businesses are subject to paying. The government and financial institutions should consider subsidising small businesses by providing loan guarantees with low interest rates. Furthermore, the government could lower taxes to new manufacturing SMEs.

Adequate Technological Capacity and Information Systems

The findings indicated lack of technology affects entrepreneurial financial governance strategies of the TUs in Ghana. Therefore, an urgent requirement for TUs is to invest in technological advances that are relevant and appropriate, thus ensuring of the integrated financial management information systems are implemented, which makes certain that entrepreneurial business processes in the TUs are automated. This will enhance innovations and financial growth of the TUs. Adopting advanced technology will enhance effective financial governance of the Tus, as well as the reliability of the financial governance.

Collaboration and Partnerships

The TUs need to form a strong partnership and collaboration with entrepreneurial organizations and industry, in order to seek or design field-related qualifications and training workshops, needed in entrepreneurial financial governance. This approach will help build the necessary field-related entrepreneurial skills and incorporate entrepreneurial culture within the TUs. In addition, the TUs further need to form business collaborative forums with the traditional universities, aimed at benchmarking their financial governance strategies. This will help the sharing of knowledge and expertise that will support business innovation and financial growth.

Promotion of entrepreneurial culture

The study concluded promotion of entrepreneurial culture is a critical factor affecting financial governance of the TUs in Ghana. It is, therefore, recommended the TUs in Ghana should incorporate an innovation and risk-taking culture, with effective leadership and training added. Considering the advantages, an environment of creative problem solving can be fostered by entrepreneurial culture, which will enable the TUs to address existing problems of financial governance challenges by developing new solutions. Likewise, entrepreneurial culture can help TUs maximise their revenue through cost cutting and increasing revenue, by means of new opportunity identification and manipulation, as well as the development of innovative solutions.

Establishing Benchmarks for Financial Governance Strategies

The TUs must identify key performance indicators (KPIs) and best practices that can be used to measure and evaluate the effectiveness of these strategies. Here are some potential benchmarks for the TUs to consider;

- **Income Diversification.** TUs can aim to diversify their revenue sources beyond tuition fees, such as research grants, industry partnerships, and donations. The benchmark could involve achieving a certain percentage of revenue from non-traditional sources.
- **Entrepreneurship ventures generated**. The TUs should track the number of entrepreneurial ventures, startups, or spin-offs that emerge from university research and innovation activities. These can provide insights into the effectiveness of entrepreneurial financial governance strategies.
- **Efficient Administrative Process**. The TUs should benchmark the efficiency of financial administrative processes, such as budgeting, expenditure approval, and procurement, which can highlight opportunities for cost savings and resource optimisation.
- **Fiscal Responsibility and Accountability.** Setting benchmarks related to adherence to fiscal policies, transparent reporting, and effective internal controls can ensure proper governance and financial strategies of the TUs.
- **Student Employments Rates**. Assessing the proportion of students who secure employment upon graduation could be linked to the university's ability to provide quality education that meets industry demands. This, in turn, affects the TUs' reputation and financial sustainability.

6.8 SUMMARY TO THE CHAPTER

The study investigated the financial governance techniques implemented by technical universities in Ghana with the goal of identifying key elements that impact their effectiveness. By conducting a thorough examination of data collected from interviews and questionnaires, various difficulties were identified.The financial governance environment in technical universities is influenced by various contextual elements, such as regulatory frameworks, institutional culture, resource availability, and the expectations of external stakeholders.Technical universities utilise several ways to improve their financial management, such as diversifying their sources of income, implementing steps to control costs, establishing strategic collaborations, and effectively managing their portfolios. Technical universities encounter numerous obstacles, including insufficient finance, bureaucratic inefficiencies, and a scarcity of financial skills among personnel, despite attempts to strengthen financial governance. Nevertheless, these obstacles also offer prospects for creativity and cooperation in order to surmount monetary limitations.

Effective leadership has been identified as a crucial element in promoting entrepreneurial financial governance projects. Effective leadership promotes an environment of openness, responsibility, and thoughtful decision-making, which in turn strengthens the ability of an organisation to adapt and endure over time. University leadership should proactively collaborate with government agencies, regulatory bodies, industry partners, and other stakeholders to promote and implement these recommendations. By doing so, technical universities in Ghana can strengthen their ability to adapt, respond quickly, and operate efficiently in the intricate financial environment. Ultimately, this will contribute to their goal of achieving academic excellence, conducting impactful research, fostering innovation, and making a positive societal influence.

6.9 CONTRIBUTION OF THE STUDY

The study on financial governance measures employed by technical universities in Ghana makes a substantial contribution to both the academic and practical domains. This study aims to fill a need in the existing literature by examining the specific financial governance techniques implemented by technical universities in Ghana. It contributes to the existing information on both entrepreneurial finance and governance in higher education institutions. The study provides theoretical insights into the junction of entrepreneurship, finance, and governance within the particular context of higher education by analysing how technical universities in Ghana apply entrepreneurial financial governance. The study utilises mixed methods, which enhances methodological diversity and rigour in investigating financial governance mechanisms in academic institutions, specifically in the setting of Ghana.

The findings offer policymakers significant insights into effective financial governance techniques for technical universities, enabling evidence-based policies to improve financial sustainability and performance in the higher education sector. Ghanaian technical universities can utilise the results of the study to compare their own financial governance procedures with those that have been identified as effective, thereby promoting enhancements in financial management and governance structure. The study supports national efforts to promote innovation, entrepreneurship, and economic development by focusing on entrepreneurial financial governance. This is particularly relevant for technical universities, which play a crucial role in building entrepreneurial ecosystems and developing human ability. The study's insights may have broader applicability beyond Ghana, serving as a benchmark for other developing nations facing comparable challenges in funding higher education.

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APPENDICES

Appendix A: Questionnaire

Faculty of Management Sciences

Department of Entrepreneurial Studies and Management

QUESTIONNAIRE

Entrepreneurial Financial Governance strategies used by Technical Universities in Ghana

SECTION A: Demographic Data

1. Gender: a) Male [ ] b) Female [ ]
2. Age: a) Under 30 years [ ] b) 31 to 40 years [ ]
   c) 41 to 50 years d) Over 50 years[ ]
3. How long have you been working for the university?

a) Less than 5 years [ ] b) 5 – 10 years [ ] c) Above 10 years [ ]

4. Highest educational qualification

a) Diploma [ ] b) HND [ ] c) Undergraduate degree [ ] d) Master's Degree [ ] e) PhD [ ]

5. Professional Qualification

a) CA [ ] b) CIMA [ ]

c) ACCA [ ]   d) Other, please specify Degree [ ]

6. Which Department do you belong?

a) Finance [ ]   b) Business Development & Entrepreneurship [ ]

b) Audit [ ]   c) Administration [ ]

c) d Others please specify ……………………………………………………………………….

7. Which staff category do you belong?

Junior staff [ ]   Senior staff [ ]   Senior Member [ ]

SECTION B: Factors Affecting Financial Governance

With regards to factors affecting Financial Governance, please tick [√] the appropriate number to indicate the extent to which you agree or disagree with each statement. The item scales are five-point Likert type scale with **1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A), 5 = Strongly Agree (SA).**

Internal Factors	**SD**	**D**	**N**	**A**	**SA**
	1	**2**	**3**	**4**	**5**
Right Management Competence					
Ineffective Internal auditing					
Lack of Financial Management Skills					
Inadequate Professional Capacity					
Lack of Innovation and Learning					
Lack of Technological Skills.					
Financial irregularities					
Ineffective Internal Controls					
Lack of effective Risk Management Procedures					
External Factors					

Political Factors					
Economic Factors					
Limit of State Regulations					
Lack of Infrastructure					
Competitions among Technical Universities					
Inadequate Budgetary Allocations					
Lack of Evaluation of Financing Options					
Ineffective Financial Monitoring Systems					
Lack of Dynamic Capabilities to venture into Academic Entrepreneurship					
Lack of Technology to be abreast with Financial Governance Strategies					

SECTION C: Entrepreneurial Financial Governance

With regards to Entrepreneurial Financial Governance, please tick [√] the appropriate number to indicate the extent to which you agree or disagree with each statement. The item scales are five-point Likert type scale with **1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A), 5 = Strongly Agree (SA).**

Critical Factors Contributing to The Entrepreneurial Financial Governance	**SD**	**D**	**N**	**A**	**SA**
	1	**2**	**3**	**4**	**5**
Engagement in business activities that generate income					
There is entrepreneurial financial planning for all businesses.					
Proper market analysis is conducted to ascertain costs and benefits of potential business activities					
Dedicated department to overseeing their investment interest					

There is resource commitment behind value generation of university business activities					
Development of strategic alliances with other businesses towards its entrepreneurial drive					
Reliability Of Entrepreneurial Financial Governance Strategies					
Universities appreciate the risk associated with engaging in business activities					
Risks are identified, monitored, and communicated to those charge with financial governance					
Critical evaluation of financing options of business projects of technical universities					
Proper risk management practices					
Management develops performance indicators factors for key business objectives and monitors the status of the indicators					
Entrepreneurial Financial Leadership Governance					
There are essential investments in the physical, human and technological infrastructure					
Providing the policy of encouragement and enabling environment for university entrepreneurial activities					
Promotion of entrepreneurial culture					
There is management support for entrepreneurial business activities					
Promotion of innovation and new thinking of generating income for universities					

SECTION D: Role Entrepreneurial Financial Leadership Governance

With regards to Entrepreneurial Financial Governance, please tick [√] the appropriate number to indicate the extent to which you agree or disagree with each statement. The item scales are five-point Likert type scale with **1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A), 5 = Strongly Agree (SA).**

Role of Entrepreneurial Financial Leadership Governance	**SD**	**D**	**N**	**A**	**SA**
	1	**2**	**3**	**4**	**5**
University leadership encourages entrepreneurship within the community					
Adequate resources are committed to university entrepreneurship activities					
University provides opportunity for students gain work experience through its business programs					
University promotes the incubation of business ideas both from faculty and students alike					
Universities offer opportunities to share value through business partnerships					

SECTION E: Effect of Financial governance on Growth of Technical Universities

With regards this, please tick [√] the appropriate number to indicate the extent to which you agree with each statement. The item scales are five-point Likert type scale with **1 = least agreed to 5 = Strongly Agree.**

	1	2	3	4	5
The university employee size has increased					
New programmes have been developed					
Increase in study Centres					
Increase in Student Capacity					
Increase in Strategic Partnerships and Collaborations					

Thank you

Appendix B: Interview Guide

Faculty of Management Sciences Department of Entrepreneurial Studies and Management

Interview Guide

Entrepreneurial Financial Governance strategies used by Technical Universities in Ghana Interview Questions

6. How is entrepreneurship shaping financial governance at Technical Universities in Ghana

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7. What are the possible ways internal and external factors are contributing to drive for entrepreneurial financial governance strategies in Technical Universities in Ghana?

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8. How is leadership integral to entrepreneurial financial governance strategies?

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9. How does benchmarking entrepreneurial financial governance strategies improve the fortunes of technical universities

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10. What possible improvement can be made to enhance entrepreneurial financial governance strategies of the Technical Universities

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Appendix C: Ethics Clearance

Institutional Research Ethics Committee
Research and Postgraduate Support Directorate
2nd Floor, Berwyn Court
Gate 1, Steve Biko Campus
Durban University of Technology
P O Box 1334, Durban, South Africa, 4001
Tel: 031 373 2375 Email: lavishad@dut.ac.za
http://www.dut.ac.za/research/institutional_research_ethics

20 April 2023

Mr R D Ofosu

P.O Box 256

Takoradi Technical University

Dear Mr Ofosu

Entrepreneurial Financial Governance Strategies used by Technical Universities in Ghana

Ethical Clearance number IREC 166/22

The DUT-Institutional Research Ethics Committee acknowledges receipt of your final data collection tool for review.

We are pleased to inform you that the data collection tool has been approved. Kindly ensure that participants used for the pilot study are not part of the main study.

In addition, the DUT-IREC acknowledges receipt of your gatekeeper permission letters.

Please note that FULL APPROVAL is granted to your research proposal. You may proceed with data collection.

Any adverse events [serious or minor] which occur in connection with this study and/or which may alter its ethical consideration must be reported to the DUT-IREC according to the DUT-IREC Standard Operating Procedures (SOP's).

Please note that any deviations from the approved proposal require the approval of the DUT-IREC as outlined in the DUT-IREC SOP's.

It is compulsory for a student or researcher to apply for recertification on an annual basis. The failure to do so will result in withdrawal of ethics clearance. It is the responsibility of the researcher and the supervisor to apply for recertification.

Please note that you are required to submit a Notification of Completion of Study form together with an abstract to the DUT-IREC office on completion of your study.

Yours Sincerely

Prof J K Adam

Chairperson: DUT-IREC

Appendix D: Proposal approval

Professor Fulu G. Netswera

Executive Dean

Faculty of Management Sciences

Durban University of Technology

P O Box 1334, Durban, 4000, South Africa

03 November 2021

Student number: 22174985

Dear Mr R.S. Ofosu

DOCTOR OF PHILOSOPHY IN MANAGEMENT SCIENCES: BUSINESS ADMINISTRATION

This serves to confirm the approval of your research proposal by the Faculty Research Committee, at its meeting on **3rd November 2021**, as follows:

1. Research proposal and provisional dissertation title:

Entrepreneurial Financial Governance Strategies used by Technical Universities (TUs) in Ghana

Supervisor: **Dr LM Lekhanya**

Co-supervisor: **Dr E Boadi**

Please note that any proposed changes in the thesis/dissertation title require the approval of your supervisor/s, the Faculty Research Committee, as well as ratification thereof by the Higher Degrees Committee.

2. Research budget to the amount of: **R10 000.00(Masters) / R15 000(DPHIL)**

Please note that this funding is not a scholarship or bursary and is therefore not paid directly to you, but is controlled by the Faculty. Any proposed changes to the use of this funding allocation requires the approval of your supervisor and the Dean. Pleasenote that funding will be reimbursed to you after the provision of receipts.

The Institutional Research Committee has stipulated that:

(a) This University retains the ownership of any Intellectual Property (patent, design, etc.)registered in respect of the results of your Masters/Doctors Degree in Technology studies as a result of the award and the provisions of the above Act;

Should you find any of the terms above not acceptable then you are given the optionto decline the Research budget award to your project in writing.

May we remind you that in terms of Rule G25(2)(b), if you fail to obtain the Masters/Doctorsdegree within the maximum time period allowed after first registering for the qualification, Senate may refuse to renew your registration or may impose any conditions it deems fit. Youmay apply to the Faculty Research Committee for an extension.

Please note that you are required to convert your registration from the informal to the formalcourse and re-register each year.

Please note that the following must be adhered to:

Registration:

1. Ensure registration has taken place ***(the onus is on the student and the supervisor toensure registration takes places at the beginning of each year whilst the student is currently engaged with his/her Masters or PhD qualification)***

2. Ensure that application for Conferment of Status has been made in the event of your undergraduate qualification being different to this application. ***Your attention is drawn to the fact that Conferment of Status is required for registration.***

3. Ensure that your supervisor has submitted your proposal to the Faculty Research Officer (FRO) for IREC clearance (institutional research ethics committee). This is in the case of Ethics level 2 and level 3 IREC (in the case of a study dealing with vulnerablepopulations). See guideline attached. ***It is the researcher's responsibility to check theEthics requirements and submit to the relevant bodies irrespective of the reviewer'srecommendation.***

Dissertation submission for examination:

1. Ensure that you submit the intention to submit form **(PG 5)**, signed by the HOD and Supervisor
2. Ensure that the signed checklist is submitted with the **PG 5**
3. Once your dissertation is submitted to the supervisor for examination purposes, communication from here on will only be with you supervisor and not with the faculty.
4. Your supervisor MUST nominate the examiners three months prior to submission of the dissertation/thesis for examination.
5. On submission for examination, please note that a PDF signed copy must be submittedto your supervisor along with the completed and signed **PG 7** form, **FMS Checklist** andsigned **Turn it in report**.
6. Feedback will be provided to your supervisor regarding the examination result after the result is ratified

by the Higher Degrees Committee (HDC).

7. In the event of a resubmission the reports will be submitted to the supervisor who willcommunicate with you for revision. Once revision has taken place your supervisor willsubmit to the FRO for resubmission to the examiners.

8. In the case where there is a discrepancy in examiners results, an Arbiter will be nominated via the HOD and supervisor and tabled at FRC and ratified at HDC.

On completion of this process, the Arbiters report will be tabled at FRC and ratified atHDC.

9. Results of the Arbitration process will be communicated to your supervisor

Graduation requirements:

1. Ensure that you submit a completed signed PG10 form
2. one hard bound dissertation/thesis with a pdf version to be sent upon HDC ratification
3. response to post graduate examination form
4. completion of study form (IREC form)

Should you experience any problems relating to your research, your supervisor must be informed of the matter as soon as possible. If the difficulties persist, you should then approach your Head of Department and thereafter the Faculty Research Coordinator.

Please refer to the 2020 General Rule Book and the Postgraduate Students' Guide 2020 concerning the rules relating to postgraduate studies, which include *inter alia* acceptable minimum and maximum timeframes, submission of thesis/dissertations, etc. Please do not hesitate to contact this office for any assistance. We wish you success in your studies.

Kind regards,

Dr Melanie Lourens obo the FRC Chair/Executive Dean: Professor NetsweraFaculty of Management Sciences

Appendix E: Gatekeeper's Letter(s)

KOFORIDUA TECHNICAL UNIVERSITY

(OFFICE OF THE REGISTRAR)

P. O. Box KF 981,
Koforidua - E/R
Ghana, West Africa

Tel: (+233) 3420 24466 (+233) 3420 22890 (+233) 3420 24993
Email: registrar@ktu.edu.gh

Tel/Fax: (+233) 3422 93004
Website: www.ktu.edu.gh

Our Ref: KTU/HR/10/23/010 *Your Ref:* *Date:* 7TH MAR., 2023

Mr. Richard Ofosu Dwamena
Deputy Director of Audit
Takoradi Technical University
Takoradi

Dear Sir,

RE: REQUEST FOR AUTHORISATION TO CONDUCT RESEARCH IN KOFORIDUA TECHNICAL UNIVERSITY

Your letter dated 27th February, 2023 on the above subject-matter refers.

We wish to inform you that Management has granted approval for you to conduct a research on "Entrepreneurial Finance Governance Strategies used by Technical Universities in Ghana" at the Koforidua Technical University.

You are, therefore, requested to contact the Director of Research for any assistance required.

Yours faithfully,

N. A. Mensah-Livingstone (Dr.)

REGISTRAR

Cc:

Director (Research& Innovation)
Deputy Registrar (HR)
Personal File

CAPE COAST TECHNICAL UNIVERSITY

(OFFICE OF THE REGISTRAR)

Tel: 0554468210/0592774927/0209185158
Website: www.cctu.edu.gh
Email: registrar@cctu.edu.gh

P.O. BOX DL 50
Cape Coast

Our Ref: CCTU/493/VOLII/114

March 9, 2023

Dr. Lawrence M. Lekhanya
Durban University of Technology
Faculty of Management Sciences
Department of Entrepreneurial Studies and Management
South Africa

Dear Lekhanya,

RE: REQUEST FOR AUTHORIZATION TO CONDUCT RESEARCH IN CAPE COAST TECHNICAL UNIVERSITY

Your letter dated March 7, 2023 on the above-mentioned subject refers.

We wish to inform you that approval has been granted for Richard Ofosu Dwamena, a doctoral student of the Department of Entrepreneurial Studies and Management, Durban University of Technology, South Africa, to administer his questionnaires to the Senior Staff and Senior Members of Cape Coast Technical University (CCTU) on his research topic entitled "*Entrepreneurial Financial Governance Strategies used by Technical Universities in Ghana*". Approval has also been given for him to interview the Head of Finance and Internal Audit, CCTU to aid his research.

By copies of this letter, the Director of Finance, Director of Internal Audit, and the Director of Public Affairs are kindly informed to provide Mr. Richard Ofosu Dwamena the necessary assistance on his arrival on CCTU campus.

Thank you.

Yours sincerely,

Francis Narh Akrono (Ph.D.)
Registrar

cc: Director of Finance
Director of Internal Audit
Director of Public Affairs

TAKORADI TECHNICAL UNIVERSITY

CENTRE FOR RESEARCH, INNOVATION AND DEVELOPMENT
P. O. BOX 256, TAKORADI - GHANA
Website: www.ttu.edu.gh **Email:** crid@ttu.edu.gh

Ref. No. TTU/ERC/23/008 **April 12, 2023**

Mr. Richard Ofosu Dwamena
Directorate of Internal Audit
Takoradi Technical University
P. O. Box 256
Takoradi

Dear Mr. Richard Ofosu Dwamena

LETTER OF APPROVAL

The Ethics Review Committee of the University has considered the ethical merit of your proposed research project titled **"Entrepreneurial Financial Governance Strategies Used by Technical Universities in Ghana"** and has approved it.

The data collected should be used for the approved purpose only. Prior permission should be sought from the committee if there is the need to vary the research project or the primary purpose for which the data would be collected. You are expected not to release the data to any other person or researcher for the same or any other purpose without prior permission from the Committee.

The committee respectfully request you to abide by all the relevant ethical principles required by your research.

Kindly furnish the Committee a summary of the key research findings upon completion of the research.

Thank you Sir, for your application.

Yours faithfully

Prof. Emmanuel M. Baah
Chairman
Ethics Review Committee
Takoradi Technical University

ADWEN, AKOMA NA NSA MA MPUNTU

KUMASI TECHNICAL UNIVERSITY

OFFICE OF THE REGISTRAR
Tel. No: 0322 022 388
Fax: 0322 022 387
Email: registrar@kstu.edu.gh

P.O. Box KS 854
Kumasi - Ashanti,
Ghana, West Africa

KsTU/ADM/456

7th March, 2023

Richard Ofosu Dwamena
Faculty of Management Sciences
Department of Entrepreneurial
Studies and Management
Durban University of Technology
South Africa

Email: 22174985@dut4life.ac.za

Dear Sir,

RE: REQUEST FOR AUTHORIZATION TO CONDUCT RESEARCH IN KUMASI TECHNICAL UNIVERSITY

Your letter dated 27th February, 2023 on the above subject refers.

We acknowledge receipt of your letter and wish to inform you that permission has been granted for you to collect data from our University for your PhD research work.

You may contact the undersigned on telephone number: 0200158301 for further assistance regarding your request.

Thank you.

Yours faithfully,

Jenkins A. Asaah (PhD)
Deputy Registrar (Gen. Admin.)
For: **REGISTRAR**

Cc: Vice-Chancellor

TAMALE
TECHNICAL
UNIVERSITY

P.O. Box 3 E/R, Tamale, Ghana
233-03720-22771, 23850
233-03720-23849, 22552
info@tatu.edu.gh
www.tatu.edu.gh

Our Ref: TaTU/T/J - 14 **Your Ref:**.............................. **Date:** March 08, 2023

Richard Ofosu Dwamena
Deputy Director of Audit
Takoradi Technical University

Re; Request For Authorisation to Conduct Research in Tamale Technical University

Your letter dated 27th February, 2023 on the above subject refers.

This is to inform you that approval has been given to your request to conduct an academic research with some selected Directorates of the University.

The Director of Finance, Director of Internal Audit and Director of Centre for Entrepreneurship. Business Development & Innovation are your contact persons to assist you in the conduct of your research. However, the University will not be associated with any cost or expense resulting from the research.

We wish you all the best in this regard.

Thank you very much.

Yours faithfully,

ALHAJI YAKUBU IDDRISU
(REGISTRAR)

CC; Vice Chancellor
Director of Finance
Director of Internal Audit
Director of Entrepreneurship, Business Development & innovation

CamScanner

ACCRA TECHNICAL UNIVERSITY

P. O. Box GP 561, Accra Ghana. Tel: +233-266-685013
Website: www.atu.edu.gh Email: riptt@atu.edu.gh

DIRECTORATE OF RESEARCH, INNOVATION & TECHNOLOGY TRANSFER

Our Ref:
Your Ref

Date: 20th March, 2023

Richard Ofosu Dwamena,
Durban University Technology
41/43 M L Sultan Rd,
Greyville, Durban, 4001,
South Africa.

Dear Sir,

APPROVAL OF RESEARCH ETHICS APPLICATION (RE #7-2023-DRIPTT)

I write to inform you that following the review of your application relating to research ethics, approval has been granted for you to collect data from Accra Technical University (ATU) as part of your methodology in your Ph.D. research project titled "**Entrepreneurial Financial Governance Strategies Used by Technical Universities in Ghana**". Your research work has been designated with Ethics ID: **RE #7-2023-DRIPTT**.

Kindly note that if you will publish your research work, you should do so in accordance with reputable Journals/Conference Proceedings recognized by ATU. Counting on usual and kind cooperation.

Thank you.

Yours faithfully,

DR. NANA YAW ASABERE
Director – Directorate of Research, Innovation, Publication and Technology Transfer

Cc: Registrar
DRIPTT File

Appendix F: Turnitin Report

PhD Thesis OFOSU Rechard

ORIGINALITY REPORT

12%	9%	7%	7%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to Durban University of Technology Student Paper	1%
2	trap.ncirl.ie Internet Source	<1%
3	ir.dut.ac.za Internet Source	<1%
4	Submitted to Higher Education Commission Pakistan Student Paper	<1%
5	researchspace.ukzn.ac.za Internet Source	<1%
6	www.abacademies.org Internet Source	<1%
7	"Global Encyclopedia of Public Administration, Public Policy, and Governance", Springer Science and Business Media LLC, 2018 Publication	<1%
8	Submitted to University of KwaZulu-Natal Student Paper	<1%

Appendix G: Editor's Letter

Helen Richter
Advanced Editing, Proofreading
& Copywriting
feeljieding@gmail.com
+27 729538169

10 October 2023

To whom it may concern

CERTIFICATE OF EDITING & AUTHENTICATION

I have proofread and language edited the PhD dissertation titled:

"Entrepreneurial Financial Governance Strategies used by Technical Universities in Ghana"

by

Richard Ofosu Dwamena

To the best of my knowledge, the work is free of spelling, grammar, structural and stylistic errors and the contents are certified as the author's own work.

With thanks.

H. S. Richter

Scanned by TapScanner

DURBAN UNIVERSITY OF TECHNOLOGY

PROOF OF REGISTRATION
To Whom It May Concern

23-Oct-2023

It is hereby confirmed that the under mentioned person is a registered student at DURBAN UNIVERSITY OF TECHNOLOGY.

Surname: OFOSU
Student Number: 22174985
Registration Year: 2023
Block: POST-GRAD ANNUAL REGISTRATIONS
Department: ENTREPRENEURIAL STUDIES & MGMT

First Names: RICHARD DWAMENA
Qualification: DPBAD1 D PHIL MAN SCIENCES (BUS AD)
Offering Type: Durban Campus Full-time
Period of Study: Study period 3
Faculty: FACULTY OF MANAGEMENT SCIENCES

Subject	Description	PreReq/Exp	Block	Class Group	Offering Type	Exam Year	Exam Month	Cancel	Amount
	Registration Fees/Levies P0 POST-GRAD ANNUAL REGISTRATIONS								5940.00
RPDB631	RESEARCH PROJECT AND DISSERTATION (3RD REG)		P0	A	D1	2023	11	N	0.00
								Subtotal:	5940.00
								Total:	5940.00

* Subjects with Requisites will be cancelled if the requisite rules are not met in mid-year exams. Refer to Department handbook.

Outstanding Balance: 41003.00

Please verify and rectify the above registration details with the Faculty Office to avoid academic and financial penalties before the dates published in the General handbook.

Faculty Officer

DUT DURBAN UNIVERSITY OF TECHNOLOGY

PROOF OF REGISTRATION
To Whom It May Concern

24-Jan-2022

It is hereby confirmed that the under mentioned person is a registered student at DURBAN UNIVERSITY OF TECHNOLOGY.

Surname:	OFOSU	**First Names:**	RICHARD DWAMENA
Student Number:	22174985	**Qualification:**	DPBAD1 D PHIL MAN SCIENCES (BUS AD)
Registration Year:	2022	**Offering Type:**	Durban Campus Full-time
Block:	POST-GRAD ANNUAL REGISTRATIONS	**Period of Study:**	Study period 2
Department:	ENTREPRENEURIAL STUDIES & MGMT	**Faculty:**	FACULTY OF MANAGEMENT SCIENCES

Subject	Description	PreReq/Exp	Block	Class Group	Offering Type	Exam Year	Exam Month	Cancel	Amount
	Registration Fees/Levies P0 POST-GRAD ANNUAL REGISTRATIONS								5665.00
RPDB621	RESEARCH PROJECT AND DISSERTATION (2ND REG)		P0	A	D1	2022	11	N	0.00
								Subtotal:	5665.00
								Total:	5665.00

* Subjects with Requisites will be cancelled if the requisite rules are not met in mid-year exams. Refer to Department handbook.

Outstanding Balance: 5665.00

Please verify and rectify the above registration details with the Faculty Office to avoid academic and financial penalties before the dates published in the General handbook.

Faculty Officer

DUT DURBAN UNIVERSITY OF TECHNOLOGY

PROOF OF REGISTRATION
To Whom It May Concern

11-Jan-2022

It is hereby confirmed that the under mentioned person is a registered student at DURBAN UNIVERSITY OF TECHNOLOGY.

Surname:	OFOSU	**First Names:**	RICHARD DWAMENA
Student Number:	22174985	**Qualification:**	DPBAD1 D PHIL MAN SCIENCES (BUS AD)
Registration Year:	2021	**Offering Type:**	Durban Campus Full-time
Block:	POST-GRAD ANNUAL REGISTRATIONS	**Period of Study:**	Study period 1
Department:		**Faculty:**	

Subject	Description	PreReq/Exp	Block	Class Group	Offering Type	Exam Year	Exam Month	Cancel	Amount
	Registration Fees/Levies P0 POST-GRAD ANNUAL REGISTRATIONS								4460.00
RPDB611	RESEARCH PROJECT AND DISSERTATION (1ST REG)		P0	A	D3	2021	11	N	29190.00
								Subtotal:	33650.00
								Total:	33650.00

* Subjects with Requisites will be cancelled if the requisite rules are not met in mid-year exams. Refer to Department handbook.

Outstanding Balance: 0.00

Please verify and rectify the above registration details with the Faculty Office to avoid academic and financial penalties before the dates published in the General handbook.

Faculty Officer