

**THE EFFECT OF FINANCIAL SENSITIZATION AND INTERNAL AUDIT PRACTICES
ON FINANCIAL PERFORMANCE IN PUBLIC UNIVERSITIES, KENYA.**

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DECLARATION

I declare that this thesis is my original work and has not been presented in any other University.

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ABSTRACT

Kenyan public universities have been performing dismally financially for several years resulting to closures of campuses and an ever-increasing pending bills. The universities have not been able to engage adequate scholars to meet the instruction capacity in the delivery of curriculums. The research looked at correlation between financial sensitization, internal audit practice and the financial performance of public universities in Kenya. The study was guided by a number of theories namely Resource based theory, prospect theory, motivation theory, with agency theory being the anchor theory. General objective of this study was to carry out evaluation of correlation between financial awareness, human capital competency, procurement process, project appraisal, technology adoption, internal audit practices and finance performance in public universities, Kenya. Independent variables were financial awareness, human capital, procurement process, project appraisal and technology adoption. The moderating variable was internal audit practices. Dependent variable was financial performance in public universities from the sampled universities. Targeted population were the public universities in Kenya with a purposive sample of 155 managers selected from three categories of universities according to their age and when they were chartered. The data was sourced by use of questionnaires and pilot survey was done to test the instrument. The data was analyzed through statistical inference. Statistical Package that is popularly used for Social Science (SPSS) software was also during the analysis of data including multiple regression and other measures of central tendency. The study findings revealed that financial awareness, human capital competency, procurement process, project appraisal, and technology adoption posted positive and high relationship with finance performance. Study also found that internal audit practices had significant positive moderator influence on relation between financial sensitization and financial performance of public universities. Study concluded that financial sensitization contributes significantly to financial performance in public universities. Study also concluded that introduction of internal audit practices enhances how it influences the financial sensitization on how public owned Universities, Kenya perform financially. Study recommends that university managers should ensure that employees understand financial risk as well as saving culture. The management should also equip employees with knowledge on financial procedures and debt policy. There is need to review staff training policy with the aim of achieving better outcome. There is need to ensure that quality of goods and services purchased are up to standard. There is need to ensure that projects are implemented as per schedule in the contract. There is need to invest in information technology infrastructure. Financial innovations such as mobile banking and internet banking to be adopted in collection of fees. There is need for frequent internal audits in the institutions. Management should build the capacity of internal audit team in terms of personnel and training. Internal audit team should be given necessary space to operate with no interference. The study recommends that future studies should consider investigating relationship between financial sensitization and how Private Universities in Kenya perform financially.

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ABBREVIATIONS AND ACRONYMS

APLU Association of Public Land - grant Universities

CUE Commission of university Education

CEE Capital Employed efficiency

EU European Union

EPS Earnings per share

GDP Gross domestic product

GTFP Green total factor productivity

HCE Human Capital Efficiency

IRR Internal rate of return

KIPPRA Kenya institute of public policy research and analysis

MIRR Modified internal rate of return

MSMES Micro and small medium enterprises

NPV Net present value

NPM Net profit margin

NACOSTI National Commission for Science, Technology and Innovation

NHIF National Hospital Insurance Fund

NSSF National Social Security Fund

OAG Office of auditor General

OECD Organization for economic co-operation and development

ROA Return on Assets

ROE Return of Equity

- RBT** Resource based theory
- SCE** Structural Capital Efficiency
- SMES** Small and medium enterprises
- UFB** Universities funding board

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Financial performance in public universities is key to the success of these entities in terms of service delivery. Universities focus on research, training and development which require finances for attainment of the set goals. Financial performance is measured based on financial statements which provides financial measures that include the growth in assets, liquidity denoted by current ratio, creditors popularly referred to as pending bills and deficits or surpluses. Public universities were established with a mission to advance public growth and development, Association of Public Land-Universities [APLU], 2023). They are to provide life changing education to students to change their backgrounds, undertake research to save lives, to drive innovation and enhance living standards and enable the society to confront the day to day challenges that may arise. The importance of universities in their role in spurring economic growth locally and nationally cannot be over emphasized. The intellectual capacity that is much needed in propelling economic drivers emanates largely from the graduates through training and research. Governments across the globe has put a lot of emphasis on the growth and expansion in order to tap this much needed capacities from various fields of training. Research has also been the main focus to add to the knowledge with a view to steer innovations for continuous improvement. Towards this end most government have endeavored to expand the degree of partnerships with private sector enhance funding to supplement the immense budget gaps that public universities continue to undergo. The funding gaps continue to be a challenge especially for universities in the growing economies from the sub Saharan Africa. This chapter provides a general overview of performance of universities in the world starting from international upto national level. Canada has 147 Public Universities which

spent \$28.9 billion in the period 2018/2019 year, and remained the same from 2017/2018. Revenues grew from 3.1% to \$30.7 billion same period. Of the total revenue, international students paid tuition fees which accounted for over one-third of it received by universities belonging to Canada in 2018/2019, The Daily Statistics Canada (2020). Universities and degree graduating colleges received larger part of their finances from government support (45.8%) and internal generated funds which includes tuition fees (29.4%). The rest comes from donors, grants, investments and other miscellaneous revenue items. Funding from provincial governments rose by \$48.1 million from 2017/2018 to \$10.9 billion in 2018/2019. However, of total funding, provincial governments funding has slowed down over time, decreasing from 38.6% in 2013/2014 to 35.4% in 2018/2019. Further to provincial funding, there was additional funding by federal government amounting to \$3 billion in 2018/2019.

For instance, University of Toronto in Canada posted a surplus of 726 million dollars in the year ending 2021 (Kahenda et al., 2022). This surplus was an increase from 441 million dollars. This was a significant growth in surplus which is an indication of future growth and expansion of the university. Revenues grew from 3,626 to 3,999 million dollars which translates to 10.3% growth while the expenses grew from 3,185 to 3,273 million dollars translating to 2.8% growth. This was a positive indicator as revenues grew more than the expenses. Revenues growth of 10.3% compared to growth of 2.8% in expenses. The net assets also grew from 6,431 to 8,074 million dollars translating to growth of 25.5%. This comprised of assets and liabilities. Assets grew from 10,727 to 12,382 million dollars translating to 15.4% while liabilities increased by a small margin from 4,296 to 4,308 million dollars translating to 0.3% growth. This was quite commendable because though the assets increased significantly by 15.4%, the liabilities increased marginally by 0.3% an indicator of prudent financial management. The net assets comprised of endowment and

other investments on assets. What is worth to note is that endowment fund grew significantly from 2,510 to 3,150 million dollars which is a cheaper source of income as compared to debt capital. To note also was that the debt ratio remained constant at 5% from the previous year. The actual debt burden ratio dropped from 2.9% to 2.7% which is positive indicator as this means reduced cost in terms of cost of debt. University of Manchester posted an improvement in surplus from £61.4 to £119.7 in the year 2022 translating to a growth of 95% an indicator of future expansion of the university (Kahenda et al., 2022). The surplus of £ 119.7 was 9.8% of income compared to £61.4 which was 5.6% of income in 2020/2021. This was an improvement as the component of expenditure was reduced from 94.4% in 2020/2021 to 90.2% in the year 2021/2022.

Further, still in United Kingdom the University of Reading posted an improved operational profits of £316.9millions from £311millions translating to 2% growth (Kahenda et al., 2022). On the other hand operational expenditures grew by £13.6millions to £334.5millions in the year 2021/2022 translating to 4.2% growth. This was a negative indicator which resulted into a deficit of £17.6 million during the year under consideration.

Taylor (2014) argues that for a university to post positive financial performance there should be sound financial management practices which include proper allocation of resources, good governance and utilization of resources as entailed in the strategic plan, proper investment to ensure financial stability of the university. He also encourages short term planning to ensure liquidity and embedding of good financial practice into the organization culture in Universities in United Kingdom and beyond.

Li-Kai et al. (2019) in their report on transformation of America Universities' financial position asserts that troubled universities can change their financial trajectory. They observe that the American universities continue to have challenges due to inadequate funding which results to

reduced enrolment and laying off of staff and sometimes mergers are undertaken for economic reasons. Other challenges include and not limited to alternative learning models like online, reduced government funding, issue of return on investing on higher education, demographic issues also reduce enrolment and persistent growth in operational and capital costs. They provided solutions to these problems in three broad categories. First category was to grow and diversify revenues which include enrolment and revenue management, completion by students, program portfolio, research funding, new business ventures and auxiliary revenues. The second category was capital and investments which included making capital more productive and strengthening endowment to make higher returns. The third category are operational efficiency which includes members of academic staff, students support mechanism not limited to non-teaching staff, high utility of facilities and efficiency in general administration in the institution. Specifically, America University in Washington D C posted a negative operating activities (equivalent to operating profit) of \$2830 thousand in 2021 and positive of \$72450 thousand in 2022. This was mainly attributed to the effects of Covid-19 pandemic (Kahenda et al., 2022). Total assets declined from \$2,413,262 in 2021 to \$2,339,968 in 2022 translating to a 3% drop, an indicator of non-growth of the university which poses a danger of its continuity in-case there is persistence in the trend.

In another study on United States of America universities, Heaton et al. (2022) asserted that financial performance is affected by governance of these universities. Independence of managers and executives allows flexibility in reallocation of resources which enhances financial performance. Thus study was based on over a decade historical data of the said universities. Regular reallocation of resources in the budget process in the universities promotes efficiency in financial results which translate to surpluses in the said budgets. The variables were flexibility in resource allocation, governance was independent variable and finance performance was dependent

variable. The data was collected for the period 2002 to 2017 a period of fifteen years and was published by national center for education statistics. From 2171 public universities, 30662 observations were made during the data collection. The universities considered had to meet various criteria which included being a public university, total net assets had to exceed one million dollars in the fifteen years from 2002 to 2017 and must have shown changes in the amount of resources allocated during the period. Net assets amount of 1 million dollars was to ensure that the size of the university was a factor to be considered in the sampling of the universities to be included in the sample, the universities which are likely to have resource allocation policy in place in terms of budgetary process. However, there was a little data from universities with smaller amount of net assets that were included in the sample. Apart from the two independent variables namely resource allocation and governance and the dependent variable which is financial performance, there was a control variable. Models were also used for each of these variables. Results of study suggested that public universities with flexibility do better in financial performance. This means that universities where there is no governance interference the management is able to freely shift resource allocations with a view to boost financial performance.

In a paper by Moody (2019) the universities in America were doing badly in financial matters maintaining a negative performance for period spanning over ten years. During that period, the universities the revenue streams were overstretched by the costs of operating the universities. This deterred the growth in capital investments hindering the physical expansion of the facilities of the entities. Much of the costs were labour costs which fell between 65% and 75% of the total costs. This situation changed in the year 2020 when the larger universities recorded growth in revenue by 4% and shifted the performance from negative to positive stable state.

According to Larkins (2019), the big five universities in Australia posted a healthy financial performance during the period 2008 to 2018. This was due to high revenues that the universities recorded. For example, in the year 2018 alone the universities made 11.8 billion dollars from a net assets base of 28.8 billion dollars. The five universities revenue accounted for 34.7% of total revenue generated by all Australian universities. The five universities experienced revenue growth of 40.2% compared to 32.8% growth in revenue in all universities in Australia. Further, the same five universities recorded a total net assets growth of 38.6% as compared to 40% of all the Australian universities. Additionally, the equity grew by 23.4% while that of the entire sector grew by 30.8%. The data that was used for this study was sourced from government department of university databases in Australia and from the universities financial statements and reports. The variables in focus were total income from operating activities, the total operational expenses, the resultant surpluses and deficits and the total assets and equity.

Still in Australia in a report by the Australian government in the year 2021 courtesy of Australian department of education on higher education, the sector posted a net of 5.3 billion dollars. Also, 39 universities posted a surplus during the year while only three posted a deficit. The higher education sector posted 38.9 billion dollars in terms of revenue. The assistance from the Australian government was 20.2 billion dollars translating to 52% of total revenue while the international students contributed 8.7 billion dollars as international students' fees. The total expenses were 33.6 billion dollars out of which employees benefits and emoluments were 19.4 billion dollars translating to 58% of the total expenses. The net assets were 70.1 billion dollars for the higher education sector in the year. The property plant and equipment was recorded as 59.9 billion dollars and 30.9 billion dollars were cash, investment and cash equivalents. The universities posted better results in 2021 compared to 2020 due to government funding, prudent investment undertakings

and cost containment measures catalyzed by the Covid -19 pandemic. The universities improved in surplus performance from 706.9 million dollars in 2020 to 5.3 billions in dollars in the year 2021. Further, while only 3 universities posted a deficit in 2021, 17 of them had posted deficit in the year 2020. This was an improvement. The revenue stream grew by 10.5% from 2020 to 2021 to 38.9 billions in dollar. On financial assistance, the Australian government increased their assistance to the universities by 10.1% from 18.4 billion United States dollars in year 2020 to 20.2 billion USD dollars in 2021. There was an enhancement of investment income from 0.9 billion USD dollars in the year 2020 to 3.2 billion in dollars during the year 2021. Expenses declined to 33.6 billion USD by 2.5% from 2020 to 2021. On the other hand total net assets grew by 11.2 % from 63.1 billion dollars in year 2020 to 70.1 billion dollars during the year 2021. Cash and cash equivalents also improved from 24.6 billion dollars during the year 2020 to 30.9 billion USD in 2021 translating to 24.1% growth.

Specifically, in a financial report about North South Wales Universities in Australia, ten (10) universities reported surpluses in the year 2021 while only one university reported a surplus in the year 2022. In the year 2022 there was a decline in combined investment income of 108percent which saw six universities record investment losses overall. Another notable underpinning reason for the performance was that there was reduced government funding in nine universities. There was also reduced collection from international students during the year. The employees' wages grew by 4.9% during the same period compared to the year 2021. The total expenditure for the year 2022 was 11.2 billion dollars. This was an increase of 694 million dollars from 2021 which represented 6.6 percent growth. This growth in expenditure was mainly attributed to increase in employees' salaries and wages.

In another report by Universities Australia in the year 2017 entitled “the facts on the University funding”, university funding under the commonwealth grants scheme is based on the students enrolment. The total funding in this arrangement grew by 59 percent from 2009 to 2015 mainly because of growth in students’ enrolment in the universities. Demand driven education also contributed to the growth of funding as more students enrolled for various programmes translating to generation of more revenues. In the year 2015, thirty-seven (37) Universities in Australia had a combined accounting surplus of 1.7 billion dollars. The report also records that the university surpluses have been declining for the last 5 years. The report also concludes that the universities and students have contributed a lot in the repairs of universities budgets together with expenditure costs that have been undertaken in the said universities.

According to European University Commission (2024), the countries in the region continues to experience challenges in funding universities. This has resulted in decline in funding levels by the governments of the respective countries. It is in this regard that the commission called for a consultative forum on the same agenda with a view to come up with strategies that would alleviate the uphill task of exploring ways and means of more revenue streams that would generate more revenues to finance the much needed investments to enable the universities execute their mandate.

In a report by European Tertiary Education Register done in 2019 on European higher education institutions funding, based on 1300 higher education institutions from 20 European countries there is a large disparity in revenues made among various institutions across the European countries. For instance half of the institutions in the register in the year 2015 earned less than 50 million pounds and 150 out of 1300 institutions accounted for the half of the total revenues in the data in the register. 5 universities in Europe exceeded 1 billion euros in the same year 2015. The universities were Cambridge, Manchester, oxford, imperial college and University College London. These

were followed closely by Leaven, Edinburgh and Zurich universities with slightly less than 1 billion pounds. In defiance of laid down policies on collecting more revenues from students, the government continues to contribute about two thirds of the funding to the universities. The only countries where students fund more than the government is in Ireland and United Kingdom. Third party funding accounts form a small portion of the total funding to the universities. The countries that top in this mode of funding are Belgium, Denmark, Lithuania and Estonia leading and Slovakia, Hungary, Latvia and Poland trailing. Despite the concerted efforts to increase private contributions only 41 higher institutions from tertiary register earned more than 10% of their incomes in the year 2015 from third party revenues. For the period 2011 to 2016 the higher education institution revenues grew in Europe a defiance to the earlier financial crisis that had been experienced. There were large disparities in revenue growth though among various countries within Europe during this five year period. This report shows that unlike in United States of America the higher education institutions in Europe largely depend on state funding contribution and just a small percentage of third party and private funding.

In another report by the European commission on the “European university funding and financial sustainability” Dominicis et al. (2011) the financial reports showed that 70% of funding of the European universities come from the government, incomes from private parties accounted for about 6 percent, non-profit making sector contributed 3 percent, 2 percent from abroad. The rest 19 percent was from residual miscellaneous sources categorized as others. Considering that public finding accounts for 70 percent, then about 20% of funds are competitively acquired depending on individual university capacity to attract these funds perhaps due to technological aspects among other aspects. In the report we observe that universities with unique attributes that places them in a better position to compete for the additional funds dominate the show. These universities include

Cambridge University in United Kingdom, Karlsruhe University in Germany, Florence University in Italy and Universities of Wageningen and Leiden in the Republic of Netherlands. The report has it that the universities in United Kingdom has the most diversified budgets with various sources of revenue streams. The institutions with diversified budgets are the ones that have declared institutional financial autonomy which depicts a better financial performance for the entity. The data was collected by national experts using ERAWATCH networks in the entire Europe in the from May 2009 to 2010

The University Manchester (2023) recorded a general improvement in financial performance for the financial year 2022/2023. Total income grew by 10.5 percent from 1.217 billion pounds in 2021/2022 to 1.345 billion pounds in 2022/2023 financial year. The total expenditure declined from 1.317 billion pounds in 2021/2022 to 1.238 billion pounds in 2022/2023 financial year representing a 6 percent decline. In 2021/2022 financial year the university had posted a deficit of (0.1) billion pounds but in 2022/2023 financial year it posted a surplus of 0.107 billion pounds translating to an improvement of 207 percent. The net assets grew from 1.808 billion pounds in 2021/2022 financial year to 1.886 billion pounds in 2022/2023 financial year representing a 4.3 percent growth. The university has strategically increased the revenue projects from 33.3 million pounds in 2021/2022 financial year to 53.5 million pounds in 2022/2023 financial year to enhance revenue generation for the ever growing financial needs of the university.

According to New Castle University (2023), the university posted a growth in income from 558.6 million pounds in the financial year 2021/2022 to 608.3 million pounds in the financial year 2022/2023 financial year. On the expenditure front they declined from 639.6 million pounds in 2021/2022 financial year to 573.3 million pounds in 2022/2023 financial year. In operation results the university posted an improvement from 81 million pounds deficit in 2021/2022 financial year

to a surplus of 35 million pounds in 2022/2023 financial year. The total net assets declined from 460.7 million pounds in the financial year 2021/2022 to 455.2 million pounds in 2022/2023 financial year depicting a negative trend in net worth of investments in the university.

Still in Open University (2023) showed that University posted an increase in income from 554 million pounds in 2021/2022 financial year to 561.9 million pounds in the financial year 2022/2023. Total expenditures decreased from 777.5 million pounds in 2021/2022 to 535.1 million pounds in the financial year 2022/2023. This resulted in the university to report an improvement from a deficit of 223.5 million pounds in 2021/2022 to a surplus of 26.8 million pounds in 2022/2023 financial year. The total net assets of the university grew from 198.4 million pounds in 2021/2022 financial year to 2018.3 million pounds in 2022/2023 financial year.

Further, Loughborough University in United Kingdom posted a surplus of 30.4 million pounds in the financial year 2022/2023. This was in comparison with a deficit of 51.1 million pounds posted in the financial year 2021/2022. The total income for the university in the financial year 2022/2023 was 379 million pounds compared to 337.2 million pounds earned in the financial year 2021/2022 which was an improvement in income performance. From the same audited report, the total expenditure incurred was 346.8 million pounds in the financial year 2022/2023 compared to 388.4 million pounds incurred in the financial year 2021/2022 registering an impressive decline. On a positive note the total net assets grew from 351.6 million pounds in 2021/2022 financial year to 400 million pounds in 2022/2023 financial year. This was a growth in the net worth of University.

Another sizeable and renowned University in United Kingdom is Oxford University. In her financial report during the year University posted a surplus of 343.5 million pounds in the financial year 2022/2023 compared to a deficit of 121.6 million pounds realized in 2021/2022 financial year a great improvement from on the results. Total income grew from 2775.4 million pounds in

2021/2022 financial year to 2924.7 million pounds in 2022/2023 financial year. On expenditure front there was also an improvement as there was decline from 2897 million pounds in 2021/2022 financial year to 2581.2 million pounds in 2022/2023 financial year. The total net assets also grew from 5252.4 million pounds in 2021/2022 financial year to 5385 million pounds in the financial year 2022/2023. The creditors declined from 1288.5 million pounds in 2021/2022 financial year to 1272.4 million pounds in the financial year 2022/2023. Overall the university performed financially well.

In a unique case, University of London posted operational deficits in the financial years end 2021 and 2022. Specifically in the financial year 2020/2021 the university posted a deficit of 6.4 million pounds and in 2021/2022 financial year the same university posted a bigger deficit of 25.3 million pounds which was a drop in financial performance. The total expenditures had also grown from 173.7 million pounds in the financial year 2020/2021 to 208 million pounds in the financial year 2021/2022. However, the total income had on the contrary grown from 167.3 million pounds in 2020/2021 financial year to 182.7 million pounds in financial year 2021/2022. In terms of net worth, the total net assets declined from 696.3 million pounds in financial year 2020/2021 to 692.2 million pounds in the financial year 2021/2022. For this university there were consistent drops in various budget lines the consequence of the poor financial performance.

According to Jencova et al. (2021) in their paper financial analysis and competitiveness of public universities of Slovakia in the context of financial management indicate low funding of Slovakian universities compared to other European Union Countries. The data on Slovakian universities used for this paper was sought from “Ministry in charge of education, science, sport and research” of republic of Slovakia, datacube database of the statistics office of Slovak republic, STATdat, Slovstat among others. The data collected was from the years 1989 to 2020. Some of the financial

ratios that were used are current ratio, growth in assets, liabilities and profitability. The researchers found out that Slovakia is lowly funded as compared to other countries in the European Union and recommended that more resources be availed for research and expansion of facilities to further university education.

Pereverzeva and Shamne (2017) in their paper financing higher education: experience of Russia and Germany infers that several directions should be taken to improve financing of Russian universities as compared with Germany universities. The financing framework should be streamlined because finances are an integral part of success of any university in Russia. They also allude to increased state funding if the universities are to achieve their core mandate given the little resources that are available from third party and private sources. The criteria for financing should be clearly defined for the universities so that a balanced and equitable allocation of resources is achieved across all universities. The sharing of resources between the developed universities and upcoming ones require deeper analysis to ensure that all universities get the much needed share of resources for growth and execution of their mandate.

Nick et al. (2019) in their paper financial sustainability in Malaysian Public Universities, officers' perceptions, respondents generally agree that students' fees charges and collection may not be the only feasible revenue enhancement strategy for the public universities. The purposes of this paper were two fold one was to get perceptions of the senior officers on the overall financial sustainability of their universities and the second one was on their take on diversification of revenue streams and cost management approaches in their respective Universities. The study focused on senior finance and administrative staff in 20 Public owned Universities in Malaysia. Questionnaires totaling 275 were administered to respondents and with 69 questionnaires dully filled and returned, analyzed by descriptive statistics on the two financial sustainability variables.

Besides concurrence that the students' fees is not the only way to enhance financial sustainability, they also agree that there ought to be full utilization of all universities resources. The findings contributed to the little research on financial sustainability in developing countries which include Kenya.

Jaafar et al. (2023) in their paper on whether "revenue diversification strategies affect financial sustainability in Malaysian public universities" asserts that revenue diversification posited positive, high relation with financial sustainability of universities basing the results on return on assets (ROA). This study used 20 universities in Malaysia using panel data approach. Revenue diversification was evaluated by Hirschman Herfindahl index and financial sustainability by Net profit margin (NPM) and return on assets. Findings noted the need of revenue diversity of the public universities in the country a strategy that has been adopted by several of them.

Kaur and Singh (2020) in their paper on financial comparative analysis of State Public Universities of Punjab, found out that there was consistency in the income levels of these universities while there were sizeable variances in the expenditure amount levels in the Universities in the state. The data for this research was for the period from 2003 to 2019 collected from 3 leading and similar universities in the state of Punjab. The data was got from the respective yearly budget statements. University of Cape Town in South Africa posted a sizeable decline in surplus for the year 2022. The university made a surplus of 1.4 billion rands in the year 2021 but in 2022 financial year the surplus marginally dropped to 0.08 billion rands. The revenue increased from 7.1 billion rands in the financial year 2021 to 7.8 billion rands in the financial year 2022. However, expenditure also grew from 6.8 billion rands in financial year 2021 to 7.4 billion rands in the financial year 2022 leading to the decline in surplus in the year 2022. The total assets declined from 15.6 billion rands

in financial year 2021 to 15.4 billion rands billion rands in the financial year 2022. This did not reflect a good performance for the year 2022.

Akosire and Akinselure (2016) recommended strong and well-structured internal control system in Nigerian Universities to enhance prudent use of resources.

Khefacha and Belkacem (2014) found out that human capital can help in improvement of performance of higher education in Public institutions in Tunisia. Nizar et al. (2014) in their research observes that new public management has a positive correlation with the performance of Tunisian universities. There is an impact on the overall performance of these universities including financial performance.

Gacim et al. (2019) found out that technological systems within universities in Morocco was beginning to be laid down. They had not been fully structured, Ktoub et al. (2022) recommended that all Moroccan universities adopt technological systems which are result based to enhance performance not just limited to financial results. Further, in the Africa front the Universities in South Africa posted a surplus of South African rands in millions totaling to 15659. This portrays a good and sound financial performance.

Mohamoud and Willy (2017) in their research found out that the human capital, resource allocation and internal control has a bearing on the performance of Puntland State University in Somalia.

In Jordan, Mohammad et al. (2023) reported a close relationship between the years of age of a university and the results in the final accounts of these universities. The size of the universities also had a bearing on the financial results during the accounting year. They recommended a check on size and age of the universities in terms of data as they affect the performance of the universities.

Tingting (2017) in his paper asserts that there are several problems that Universities and Colleges do encounter. These are not limited to research funds mismanagement, asset management, budget management, financial analysis and internal control. He provides various solutions to these problems which include strengthening of budget process, improved scientific research funds administration, strengthen fixed assets maintenance and replacement, enhance internal processes and risk management, improve human capital and intensify the financial analysis.

Undoubtedly, Kenya public universities contribute a substantial boost to economic growth both locally and internationally (Valero & Reenen, 2018). Through research, training and innovation graduates from these universities get equipped to support new and existing economic ventures, discovery of new initiatives in job creation and improve the overall standards of living by the humankind. The other spheres of life also benefit from the knowledge acquired from the universities. These are not limited to technological, environmental, botany and zoology. No matter how much a country has in terms of resources, natural or otherwise, they must be translated into consumable form. For instance the resources could be minerals, geothermal, cash crops, infrastructure among others which may require to be put into use or processing to have or enhance economic value. To achieve this then expertise will be required to transform the resources. The expertise can be tapped from university graduates in engineering, architectural, environmentalists, information technology experts, computer science among other careers and professions. Higher education is a key driver to economic growth due to the fact that human capital contributes immensely to utilization of resources in a prudent and efficient manner (Valero & Reenen, 2018). For instance in United Kingdom the benefits of university education are far above the inputs that are made towards graduating the students and their output to the economy. However, most governments are converting donations to students into loans which adversely affects the poor

students who qualify for university admission. This has discouraged several poor students with the potential for future growth from joining universities for further education. The economy therefore suffers from shortage of expertise that would have emanated from the training foregone. Graduates also earn higher than non-graduates and as such an added advantage to have higher education from universities. Human capital boosts GDP per capita income and therefore overall growth and development. Innovations initiated by the graduates from these Universities stimulate economic growth and this occurrence can be verified (Toivanen & Väänänen, 2016). Universities also offer opportunities for economic growth through purchase of goods and services within and without the areas they are situated. In Kenyan universities, there are divisions that deal with specific roles with a view to enhance efficiency in the institutions. These divisions are mainly Finance and Development, Administration, Academic and student affairs and finally research and innovation. These divisions are further divided into departments. For instance, Finance and Development division includes Finance Department and Estates Department.

Further, Mayaka et al. (2020) found out that commercial venture revenue has direct bearing how public universities in Kenya performs financially. The income generating activities boost income to the universities which supplements the funding from the government and other support.

Kahenda et al. (2022) in their research on financial reporting systems and public universities in western Kenya found out that the reporting systems significantly and negatively influenced financial performance of universities and therefore concluded that financial systems should be improved to reduce the deficits made in the universities. The study targeted 10 universities in the region out of which 138 respondents responded from a sample of 215 respondents.

According to Kathomi et al. (2022), there is are significant relationships between government grants and current ratio and student fees and current ratio in public universities in Kenya. These

findings were found from a sample of 31 public universities in Kenya. The data retrieved from financial accounts of universities for duration of 5 year starting 2015 to 2020.

In the Kahenda et al. (2022) University of Nairobi in Kenya posted a declining financial performance. The University recorded a 1.6 billion shillings deficit in 2019/2020 financial year which was more than a deficit of 1.3 billion shillings in 2018/2019 financial year. However, the total income for 2019/2020 financial year was 12.8 billion shillings compared to 12.3 billion shillings posted in 2018/2019 financial year. The expenditures also grew from 13.6 billion shillings in 2018/2019 financial year to 14.5 billion shillings in 2019/2020 financial year. On the other hand the total assets grew from 215.9 billion shillings in 2018/2019 financial year to 216.7 billion shillings in 2019/2020 financial year.

Kenyatta University, the second largest public University in terms of students' population after University of Nairobi also posted a huge deficit of 1.3 billion shillings in the financial year 2019/2020 compared to 677.8 million shillings deficit in 2018/2019 financial year representing a poorer performance in the financial year 2019/2020. The University also posted a decline in total revenue from 8.5 billion shillings in 2018/2019 financial year to 7.9 billion shillings in the financial year 2019/2020. On expenditure line the university recorded a slight decline from 9.22 billion shillings in 2018/2019 financial year to 9.24 billion shillings in 2019/2020 financial year. This resulted in deficit results in the two financial years 2018/2019 and 2019/2020 with the later posting a bigger deficit an indicator of a poorer financial performance. While the total assets declined from 19.4 billion shillings in 2018/2019 financial year to 19 billion shillings in 2019/2020, the trade and other payables increased from 4.4 billion shillings in 2018/2019 financial year to 5.7 billion shillings in 2019/2020 financial year.

Moi University also in Kenya posted a poor financial performance in the financial year 2019/2020. During the year, the university consolidated accounts recorded a deficit of 824.6 million shillings which was higher than the deficit of 326.4 million shillings posted in the financial year 2018/2019. However, the total revenue had grown from 6.2 billion shillings in 2018/2019 financial year to 7.7 billion shillings in the financial year 2019/2020. The total expenditures also grew from 6.5 billion shillings in 2018/2019 financial year to 8.5 billion shillings in 2019/2020 financial year. This resulted in deficits for both 2018/2019 and 2019/2020 financial years with the later year posting a higher deficit. On the other hand the net worth of the university grew from 9.7 billion shillings in 2018/2019 financial year to 10.5 billion shillings in the 2019/2020 financial year.

Maseno University located in the western region of Kenya posted a sizeable deficit in the financial year 2020/2021 of 186.8 million shillings compared to a deficit of 49.1 million shillings posted in the financial year 2019/2020 financial year. The total revenue for the financial year 2020/2021 was 2.7 billion shillings compared to 3.3 billion shillings in the financial year 2019/2020 representing a decline in revenue performance. On the expenditure front the expenditure declined from 3.4 billion shillings in 2019/2020 financial year to 2.9 billion shillings in the financial year 2020/2021. This resulted in the deficits for both 2019/2020 and 2020/2021 financial years with the later having a bigger deficit. In terms of total assets, the university recorded a slight decline from 7.3 billion shillings in 2019/2020 financial year to 7.2 billion shillings in 2020/2021 financial year.

Technical university of Kenya also posted a bigger deficit of 693.3 million shillings in 2020/2021 financial year compared to a deficit of 444.2 million shillings in the financial year 2019/2020 financial year. The total revenue had however grown from 2.7 billion shillings in 2019/2020 financial year to 2.8 billion shillings to 2020/2021 financial year but the total expenses also grew from 3.2 billion shillings in 2019/2020 financial year to 3.5 billion shillings in the 2020/2021

financial year. This resulted in the deficits recorded in both 2019/2020 and 2020/2021 financial years with the later year recording a higher deficit. The total assets grew with a small margin from 6.4 billion shillings in 2019/2020 financial year to 6.5 billion shillings in the 2020/2021 financial year while trade and other payables grew marginally from 3.8 billion shillings in 2019/2020 financial year to 4.7 billion shillings in the 2020/2021 financial year.

1.1.1 Financial awareness

Financial awareness is an integral component in an institution to ensure that prudent and sound financial practices are adhered to. Financial awareness is critical for both the executors of financial policies and regulations and also the users and stakeholders of the financial information in a particular organization. It is therefore important that all members of the institution ranging from the lowest to the highest cadre be conversant with financial rules, policies and the acts of the law that exist to support the making finance decisions for the growth of institution. Literacy on financial matters is being able to make decisions that are based on information and include and not limited to saving behavior, investment decisions and financing decisions in the capital structure (Klapper et al., 2015). People can attain a more robust and prosperous life if they are endowed with financial awareness (Holik & Mulyeni, 2019). These scholars assert that with the knowledge of financial management, better decisions are made with a resultant success in people's lives. Due to the ability to take right steps people maximize profits while working within the regulatory framework that exist. They ensure there is compliance to legal requirements that may not be limited to registration of businesses, payment of taxes and general compliance to ethical behavior.

Huston (2010) looks at financial awareness as a synonym of financial literacy that is always in close relationship to the accumulation of knowledge about finance products and how they can be put to use. Formal education on financial management equips the trainees with financial

awareness. This in turn enables these trained people to make prudent decisions in financial management. Andarsari and Ningtyas (2019) observed that people with more knowledge and higher appreciation of financial issues display a better financial performance in their day to day operations. It cannot therefore be overemphasized that that financial awareness is key to better financial decision making.

1.1.2 Human capital competency

Human capital is very important and strategically assists the company in its lifelong goals achievement (Nuryani et al., 2018). They also state that human capital also entails social capital which is an important component for public relations aspect. Human capital is the investment by an entity through training and education of employees to acquire skills, knowledge, expertise necessary for decision making and implementation in order to meet the intended objectives of the entity. Though intangible, human capital is a vital ingredient in any company for the success and attainment of the intended purpose as stipulated in the short and long term goals. It ignites and enhances innovation in line with the ever changing markets. Human capital also referred to as intellectual capital is defined as intangible asset in an entity for use in decision making though it is not recorded in the financial position as an asset, Ozkan et al (2016) as cited in Edvinsson (1997) Knowledge and skills are the foundation of having a competitive advantage over the others (Vargo & Lusch, 2016). The knowledge enables the decision makers to outwit the competitors in the market to gain market share and consequently maximize the profits. Human capital in the universities is critical as the set targets realization will definitely depend on the qualifications, experience and competence of employees. An institution that lacks a bank of competencies will have an uphill task in achieving the set goals. Human capital that lacks integrity would also

adversely affect the performance of the university. Growth and expansion would also be a mirage to the institution.

1.1.3 Procurement process

Procurement is the buying/ purchasing of commodities and intangible at the fair price in acceptable quantities and qualities (Awuah et al., 2022). Purchasing involves ordering and receiving of the goods and services. This process when undertaken by a public entity becomes public procurement and is guided by Public Procurement and Disposal Act” and its regulations, (Public Procurement and Disposal Act [PPRA], 2015). Goods and services being acquired must be economically viable to ensure value for money spent. Procurement involves requisitions, orders, transport, receipts, inspection, storage and issues. Graells and Gideon (2016) records that United Kingdom universities procurement is governed by European Union Public procurement rules. The rules are geared to ensure that embezzlement of funds in the public coffers is reduced if not eliminated. These depict the importance which proper procurement attaches for good financial performance of government entities. The English Universities are obligated to comply with European Union procurement rules, (Graells & Gideon, 2016).

Nyongesa and Osoro (2019) defines procurement as procedures and policies that guide the purchase all goods and services in a company and can at times include leasing and hiring of assets, disposal of disposable items which have become obsolete. Chartered body of supply and procurement (2021) defined procurement process as purchase of services and goods that make an organization run profitably and ethically. Profitability by not incurring unnecessary costs and ethical by observing integrity and honesty among other core values. According to Georgino et al. (2021), as cited Brum (2018) procurement process should interact and integrate an entity supply chain so as to create value for the money to the entity. Procurement process is key to the university

and through this process, university can lose money in terms of large amounts through failure to comply with approved procurement laws of the land. Inflated prices and kickbacks in procurement process may influence the efficiency and effectiveness of controls in purchase of goods and services. Employees should be conversant with applicable procurement process in terms of legal provisions and the effect the process may have on the financial implication of an entity. Public universities are not spared and the members of staff especially those involved in major decision-making, should be aware of the implications of their decisions in as far as value for money is concerned.

1.1.4 Project appraisal

Project appraisal is a well multi-staged process whereby new projects are ear marked, evaluated, profits projected, costs forecasted and the returns projected to determine the most viable project to be undertaken (Kipkirui & Kimungunyi, 2022). If the process is followed to the letter then value to the procuring entity is maximized. Since there are capital projects the usually involve large sums of money and therefore the need to handle the process with a lot of diligence and care of duty to avoid loss of huge amounts of money. According to Eisenberg (2009), the project appraisal identify projects that have maximum social returns, project that increases country's wealth, stop bad projects, estimate the fiscal impact, enter into partnerships for cost recovery and assess the impact on environment, development and poverty levels. Evaluation of projects to be undertaken is important to ensure that the project is feasible both economically and socially. Unevaluated investment may lead to unproductivity and cash crunch. This may lead to slow down in operations due to lack of working capital. This may result into unpaid salaries, pensions, loan repayment, tax remittances and others like NHIF and NSSF.

1.1.5 Technology adoption

Technology is the automation of processes within an entity for delivery of services and goods/products for efficiency and effectiveness (Tshukudu et al., 2022). This in general enhances the overall performance of the entity and saves on time and costs. It also improves the quality of production of goods and services being offered and thus increases market share of production. For instance financial technology in Bahraini Banks had significant positive relationship with financial performance (Al-Sartawi, 2021). Importance of adoption of technology cannot therefore be overemphasized as it comes along with a myriad of benefits to both the organizations and customers. In Kenya technology has been used to enhance financial performance in commercial banks. This has been achieved through automation of financial services which reduces the staff required and eases access to the financial products by the customers.

1.1.6 Internal audit practices

Internal audit is a basic function that management uses in internal control management of organization resources to avoid their wastage and misuse (Saddam et al., 2021). This function is normally carried out by specialists in the organizations with a view to increase productivity. In their research on “internal audit and financial performance in commercial banks” in Yemen they looked at the independence, the quality and size of the internal audit function. 90 questionnaires were administered to 23 banks from Yemen and the findings were analyzed and showed that audit practices internally relate positively with how banks perform financially. Further, Awdat (2015) carried out a research carried out a research to see how internal processes of audit impact on how commercial banks in Jordan performs financially. Parameters for the audit were internal audit quality, management of audit, develop risk management control. These variables were found to positively relate to performance of banks under study.

And in Nigeria, Ojong and Ekponta (2014) engaged in research on “the effect of internal audit on the finance performance of tertiary colleges in Nigeria”. Parameters for audit function were regular audits, competency of audit staff, and independence of audit function, accountability and supervision of audit staff. The findings were that the college under study had an effective internal audit function but had no significance on college financial results.

In Kenya, Muchiri and Jagongo (2017) in their research on the internal auditing and how Kenya meat commission performs financially it was found out that internal audit plays a big role on finance performance. Variables of the audit were corporate governance and audit committee. The primary data was collected from 55 managers in the institution and the data was both ordinal and nominal.

1.1.7 Financial performance

Pintea et al. (2014) measured financial performance by total income, total expenditure from statement of finance performance. On financial position, Returns on Equity total assets, and Returns on Assets and were the consideration. Kyere and Ausloos (2019) measured financial performance by use of Tobin Q (Q ratio) and returns on assets (ROA). The Q ratio is given by entity value in the market/ total assets of firm’s value. ROA equals Net income/ total assets times 100.

According to Galant and Cadez (2017) financial performance is measured by profitability ratios that are calculated using data from the available financial statements of the firm. Kamatra and Kartikaningdyah (2015) measured financial performance by various ratios namely Return on Earnings, Earnings per share and Net profit margin. The performance of a university is largely measured by its ability to meet its core mandate which is research and training. This can only be achieved if human capital and infrastructure required is in place. The infrastructure will include

lecture halls, workshops and laboratories. These can be measured by assets growth and ROA. The ability to meet day to day operations can be measured by current assets ratio, deficit or surplus in financial performance and ROA. Kenyan public universities have in the last few years performed below expectations registering deficits and increased amounts in pending bills. This has resulted to some universities closure of campus in endeavor to reduce the financial burden on the already strained universities financial resources.

1.2 Problem Statement

Universities in Kenya are not any exception but contributes to the economic growth around the areas where they are situated and beyond through procurement of goods and services for operations and expansion. Further, students also spur economic growth by consuming from the local businesses and far for their upkeep while pursuing their education. Public universities in Kenya are over forty in number including colleges, (Commission of University Education [CUE], 2022) and this sizeable number contribution to our economy cannot be overemphasized due to the benefits of existence of universities that accrue to the economy. The collapse of Kenyan Public Universities is imminent given the latest report (Universities Funding Board [UFB], 2023). In the report, the universities owe over fifty six (56) billions to various creditors. This poses a great danger to the sustainability of these Universities. Due to the importance of universities in economic growth, search for solutions to their financial problem is inevitable. Research on Financial risk has been done (Wenbin & Liying, 2018). Most universities are overburdened by debts exposing them to financial risk. Wangari and Muturi (2018) conducted a research on budget compliance, finance planning, investments and monitoring. These had significant bearing on financial operations by Universities. The financial stability of public universities in Kenya has continually weakened, (Kenya institute of public policy research and analysis [KIPPRA], 2022). This is so inspire of the

fact that students population has continued to grow from 546,669 in 2021 to 562,066 in 2022 academic years. Public universities in Kenya continue to perform dismally financially. Kenyatta University posted operational losses, auditor general. Jomo Kenyatta University recorded non remittance of statutory deductions of over 4billions and operation loss of over 1.3billions according to auditor general report (2021) and Multimedia University operational loss of over 200 million in the same year. Stalling of projects in these universities have also been raised in the audit report. Considering the research that has been done, some of the causes of poor financial performance has been studied.

For example, Kithinji et al (2023) found out that cash management is key for success of public university financial performance. However, these studies have not looked at the extent financial sensitization relate with financial performance in the Public Universities. This research therefore focussed on financial sensitization among the key staff in public universities in Kenya. The variables were financial awareness, human capital, procurement process, Projects appraisal, Technology and internal audit practices as moderating variable. The study of financial sensitization among staff would enable the players to improve on service delivery in cognizance of policies, rules and regulations that exist with a view to enhance overall performance of the universities in financial matters.

1.3 Purpose of the Research

This research sought to determine relationship between financial sensitization and performance of all public universities, Kenya. It also intended to find out how internal audit practices moderate relation between operating variables, and finance performance in Universities, republic of Kenya.

1.4 General objective

The objective was to find the effect of financial sensitization and financial performance of all public universities, Kenya and the moderating effect of internal audit practices.

1.4.1 Research Specific Objectives

- i) To assess relationship between finance awareness and financial performance of Public Universities in Kenya.
- ii) To examine the relationship between human capital competency and financial performance of Public Universities, Kenya.
- iii) To find out the relationship between procurement process and financial performance of Public Universities in Kenya.
- iv) To check whether there is relationship between project appraisal and financial performance of the Public Universities, Kenya.
- v) To assess the relationship between technology adoption and finance performance of the Public Universities, Kenya
- vi) To establish if internal audit practices moderate the relationship between financial sensitization and financial performance of Public Universities.

1.5 Research Hypotheses

The hypotheses were generated to guide the research as follows.

H0₁ Financial Awareness has no significant statistical influence on financial performance of public Universities in Kenya.

H0₂ Human capital competency has no significant statistical influence on finance performance of public Universities, Kenya.

H03 Procurement process has no significant statistical influence on finance performance of public Universities, Kenya

H04 Project appraisal has no significant statistical influence on finance performance of public Universities, Kenya

H05 Technology adoption doesn't have significant statistical influence on finance performance in public universities, Kenya

H06 Moderation by internal audit practice do not have significant statistical influence on effect of financial sensitization on financial performance in Public Universities, Kenya.

1.6 Justification of Research

Given poor financial performance posted by public universities in Kenya, Report UFB, financial sensitization in public universities would be an area of interest to unearth any underlying cause of the performance with a view to improving the performance.

1.7 Limitations of Research

In order to have results that are of value addition in this research, there was need to collect primary data which was confidential and sensitive considering their financial nature. This was compounded by the fact that respondents included senior management team who were fairly busy and did not have time to respond to data collection tools immediately. The research design was limited to Pearson correlation, Analysis of variance (ANOVA), multiple regression model and descriptive statistics. The research design could have been expanded to use other techniques which include Chi square and spearman's correlation.

1.8 Delimitations of Research

To mitigate the sensitivity and confidentiality of the data required the researcher assured them of utmost confidentiality on one on one together with the approval letter from “National Commission for Science, Technology and Innovation” (NACOSTI). On availability of management team patience was exercised by allocating sufficient time for their responses. The research design that was adopted was used to analyze data and conclusions were made therefrom.

1.9 Significance of Research

The findings of research may be used by the University management, and other stakeholders that are not limited to Ministry of Education and National Treasury for enhancement of prudent use of financial resources in the public Universities in Kenya. Further, researchers can build on the findings of this research for further accumulation of knowledge.

1.10 Assumptions of the Research

It was expected that respondents would be the people that directly indulge on the various variables that were the focus of the research to enhance the credibility and reliability of data collected to ensure that the findings and conclusions reflect the truth on the ground. The assumption was also that variables namely financial awareness, project appraisals, procurement process, human capital competencies and technology adoption contributed to variations in financial performance in Public Universities. The tests carried out were to measure the effect on these variables on financial performance.

1.11 Scope of the Research

The scope of research was the Public Universities in Kenya. The Research covered the last 5 audited years starting 2018/2019 to 2022/2023. The research focused on human capital, financial

awareness, procurement process, project appraisal and technology adoption. Moderator effect by internal audit practice on relation between these variables and finance results of Universities was also assessed.

1.12 Operational Definition of Terms

Financial Literacy/awareness: Financial awareness is ability of making decisions that are based on information and include and not limited to saving behavior, investment decisions and financing decisions in the capital structure (Klapper et al., 2015). This was a measure of financial sensitization and would be looking at how aware the staff dealing with financial matters are, for better decision making. There may not have the formal training in financial matters but how versed they are as far as what is expected of them is concerned.

Human capital Competency: Human capital is the investment by an entity through training and education of employees to acquire skills, knowledge, expertise necessary for decision making and implementation to achieve intended goals by the entity (Nuryani et al., 2018). The competency of staff as a parameter of the independent variable was also looked at especially for the areas that require professional expertise for efficient delivery of services within the institution.

Procurement process: Procurement is the buying/ purchasing of various items at fair price in desirable quantities and qualities (Awuah et al., 2022). Procurement process plays an integral part in management of resources as it involves colossal amount of money in the entire budget of the universities. An appreciation on the sensitization on conduct of procurement against the overall financial performance was key knowledge for subsequent decision making in the institutions.

Project appraisal: Project appraisal is a well multi-staged process whereby new projects are earmarked, evaluated, profits projected, costs forecasted and the returns projected to determine the most viable project to be undertaken (Kipkirui & Kimungunyi, 2022). The project appraisal

techniques understanding was looked at with an aim of determining how decision making is made on investments selection and the effect it may have on the financial performance.

Technology adoption: Technology is the automation of processes within an entity for delivery of services and goods/products for efficiency and effectiveness (Tshukudu et al., 2022). This parameter measured the extent to which technology is employed in the universities and how the adoption affect the financial performance

Internal audit practices: Internal audit is a basic function that management uses in internal control management of organization resources to avoid their wastage and misuse (Saddam et al., 2021). This function is normally carried out by specialists in the organizations with a view to increase productivity. The internal audit practices included the quality of audit, size of the audit function, the independence of internal auditors and frequency of internal audits.

Financial performance: Pintea et al. (2014) measured financial performance by total income, total expenditure from statement of financial performance. On the financial position, total assets, ROA and ROE were used. Financial performance has a direct bearing on the delivery of core mandate of universities because human capital and infrastructure are vital for smooth training and research in universities. University that is riddled with poor financial performance may not attract requisite manpower and facilities for the desired academic standards. Other measures of financial performance include the growth in total assets, liquidity ratio given by current ratio, deficits/surplus and creditors also referred to as pending bills.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Second chapter covered research work that underpin the variables of this study. This falls under the theoretical framework which forms the basis of the effect of the respective variable in any one given institution. The chapter also recorded the empirical review which records findings of other researchers on the variables on this study. The conceptual framework was also covered here. Finally, operational framework was covered as a guide to the entire study.

2.2 Theoretical framework

Theory review assists in determination of theories that exist. Based on the theories then the hypotheses are formulated and tested whether they hold. In this study a number of theories have been lined up as the basis for the variables of the study. The resource based theory is earmarked for project appraisal, technology adoption and procurement process variables. These variables involve large sums of money and therefore part of the resources of the entity. Agency theory covers all variables of this study. Agency is how principal and actors relate and therefore the principal is the public and actors are employees of the entity. Institutional theory is the basis of staff financial awareness, and organizational culture. The way an institution carries out its activities and the communication channels that exist will affect the flow of information and consequently create awareness among staff in the entity and externally. Motivational theory is the basis of human capital variable which is vital for any given institution. Staff need to be motivated for their enhanced delivery and therefore this theory best suits the human resource variable. Prospects theory was the basis of financial performance and project appraisal. Without a stable financial

performance then there would be no prospect for growth of the institution. Consequently, prospect theory supports performance of firm. The resource based theory is anchor of this study. Resource based theory is essential to ensure that the resources are prudently management in order to spur the performance and thus the growth and expansion of institutions.

2.2.1 Resource Based View (RBT)

RBT was brought out by Penrose (2009) who came up with a model on efficient use of institutional resources for achievement of set objectives. The model also focused on creation of more opportunities for production and various strategies undertaken by a firm for need realization. In his first publication, Penrose came up with a concept of how an institution can have an integration of various resources to enhance its chances of attaining her set goals and synergize various strategies for consistent productivity. Resource based theory provides a framework of a list and project the parameters of institution's performance and how competitive the institution may become competitive within the market realms. RBT focuses on internal management approach whereby the firms internal resources are utilized well as opposed to the external management resources approach to find out how much successful or unsuccessful the institution is on its activities (Kozlenkova et. al.,2014). Theory attempts to expound on how optimally resources can be used to put the institution on the competitive edge over the competitors (Barney, 2014). Some confusion exists as to whether the theory is RBV or RBT with researchers using either of the labels. However, based on research community observations, several researches assert the research based theory assertions hold (Kozlenkova et al., 2014). There are two underpinning assumptions of RBT in relation to why one firm may maintain a competitive advantage over the others while the other firm may continually outdo the other firms in sustaining such competitive advantage (Helfat & Peteraf, 2003). The first assumption is that packages of resources available are differ from one

firm to the other. The uniqueness of resources in various firms translates to different competitive advantages on them. Some firms have more skills with a potential to post a higher competitive advantage.

The other assumption is the complications in trading resources among various firms which result in resource differences. This is due to inability to move resources inter firms. Both Utami and Alamanos (2023) and Porter (1989) asserts that the firm's internal factors that include capacities and resources determine the profitability of the firm. The work by Barney (1991) on resources was the major contribution to transformation of resource based view into the RBT. Traditional RBT does not explain how and why firms would have competitive advantage under conditions of uncertainty and dynamism (Peteraf & Helfat, 2003). An encompassing RBT proposes that a firm can attain competitive advantage by apart from using the existing resources they also utilize the emerging resources through training, learning, and accumulation of physical and intangible assets as time goes on. The logic behind resource base is that if the very key resources are held by some firms then they will have competitive advantage over the firms that do not have these resources. (Barney, 1991). Consequently, firms can achieve a competitive advantage continuously by exploiting the resources in their custody to the disadvantage of the other firms that lack them, (Peteraf & Helfat, 2003). In RBT the resources include, knowledge, expertise, capital assets, business processes, information and are managed by a firm to enhance efficiency and effectiveness of operations (Barney, 1991). The sources of resources can be internal which include, operational processes, research and development, logistics and branding of products (Kozlenkova et al. ,2014) while those resources that are external may include the responsibility of sellers, as per Lewis et al. (2010) consumption and technological changes, as per Li and Calantone (1998). A firms resources can be classified into three categories namely, human capital, the tangible/physical assets and

organizational resources (Barney, 1991). The human capital resources include qualifications, application, interpersonal relationships, experience, intelligence among the management and other employees. The physical assets include buildings, machinery, motor vehicles, furniture and plants. The organizational resources include planning, coordinating, directing and controlling. RBT has four conditions that assist to assess whether a resource has the potential to generate competitive advantage. These conditions are value addition, scarcity, immovability and sustenance (Barney, 1991). The resource based theory covers project appraisal, human capital competency and procurement process as these variables take a substantial amount of financial resources in the universities. Projects are resources in an entity as they contribute to generation of products in the organization. For instance a building that is used as lecture halls supports the teaching of students in a university. Human capital is also an asset in manual and automated systems. In automated systems human capital operates the machines which include computers and other machineries in the production process. Procurement process involves purchasing of equipment, machines and buildings which at times are of immense value which can cost an entity huge losses if not taken care of. These resources management are supported by resource based view.

2.2.2 Agency Theory

Agency theory deals with inter relationship between two parties, the principal the owner who delegates to the agent who does the work. The theory describes a relationship in a form of contract, (Jensen & Meckling, 1976). In an institution we have the owners who are the employer and the employees who execute on behalf of the owners in their day to day activities of the institution. The contract is between owners and employees who are the principal and agents respectively. Theory endeavors to solve two main challenges that we experience in the agency relationship. The two major problems occur when there is one a conflict of interest by agent against the interest of the

principal. Where the interest of both parties conflict, the interest of the principal should prevail. The other major problem that the theory seeks to solve is the difficulty and cost involved in measuring whether the agent is acting in the full interest of the principal. The attitude towards risk by both the principal and agent may differ which may lead to different approaches to risk mitigation measures by both parties and thus a resultant conflict (Eisenhardt, 1989). The agency theory therefore seeks to determine the best contract terms that would bind a principal and agent relationship that would promote synergy in the management of an institution. The contract would focus on people, organization and information sharing. On people the interest would be on terms of engagement, remuneration, self-interest and risk aversion. Organization goals should prevail against personal interests. Agency theory has been applied in various organization phenomena such as remuneration (Eisenhardt, 1989) acquiring of diversified strategies (Amihud & Lev, 1981) relationship with and without the board (Fama & Jensen, 1983) shareholding and capital structure (Jensen & Meckling, 1976; Agrawal & Mandlker, 1987) Vertical synergy (Holtstrom & Anderson, 2021; Eccles, 1985) and innovation. Agency theory can be summarized as the relationship between principal and agent who have come together for a corporate behavior with different goals and attitudes towards risk (Eisenhardt, 1989). Agency theory has grown along two schools of thought namely positivist Theory and principal- agent research (Fama & Jensen, 1983).

Positivist theory seeks to identify areas where conflict between the principal and agent may arise and how governance may assist in mitigation of such self-serving conduct by the agent. Positivist researchers have put their focus on the principal agent relationship of management and employees of large public institutions (Berle, 1932). Further, Jensen and Meckling (1976) researched on the ownership of finance structure in a corporation and the alignment of holding by managers and the conflicting interest arising therefrom with those of the shareholders. Fama (1980) focused on

information on capital and labour markets as a means of checking on the excesses of the executives in the corporation. Fama and Jensen (1983) discussed how the board of directors would disseminate information to the shareholders in order to check on the opportunism by the executives in the institution. On the other hand, principal agent researchers focus on general theory of relationship between principal and agent in a firm. This can be applied to doctor -patient, teacher-student, employer and employee and other agency relationships (Harris & Raviv, 1978). The principal –agent paradigm is formal and therefore characterized by specific assumptions and concluded by mathematical proof. The principal agent research is broader than positivist which focuses largely on Management and owners relationship in a firm. In conclusion the agency theory has captured the attention of various disciplines including finance. It deals with the relationship between managers and owners within the firm and should therefore be revisited in light of the much focus on the performance of firms both financial and otherwise. This theory therefore cuts across all the variables in this study thus the anchor theory

2.2.3 Motivation Theory

Human beings have something that a machine do not possess. This is inspiration and spirit that work together with the physical bodies to achieve the set organization goals (Acquah et al., 2021).They also assert that motivation is key for all aspects of living. There are various need theories under motivation and these are the Maslow hierarchy of needs, Herzberg motivation theory, MacClellands need for achievement theory and Alderfer’s ERG theory. Motive is what leads somebody to act in a certain manner or to have an inclination to behave in a particular way, Motivation on the other hand are the drivers within an individual that propel him to meet the desires and needs (Gallagher & Einhorn, 1976). The extent of the needs will guide on the compensation that will motive or reward the employee adequately. Most psychologists believe that motivation is

triggered by our various needs that remain unmet. The earliest and most popular theory of motivation was developed by Abraham Maslow in 1943 and presently referred to as Maslow hierarchy of needs. It involves five categories of needs starting from the bottom and the bottom category need must be met first, before the other four upper categories (Greenough et al., 1987). The five needs in the order in order of hierarchy are physiological needs which include food, shelter, clothing, the second need is safety need which include security and protection physically. The third need is social need which include inter personal relationship, recognition, acceptance, the fourth need is self-esteem which comes from a person's inner being and include conquering, independence, confidence and finally self-actualization need which include fulfilment of own desires, realizing full potential and becoming what one wants to become. Alderfer ERG theory identifies three classes of needs as range rather than in terms of hierarchy (Alderfer et al., 2008). The classes are existence, relatedness and growth needs. The existence needs include the basic necessities like food and shelter and represent the physiological and safety needs in the Maslow hierarchy. The relatedness needs are the relationship with the family and friends, belongingness and emotional support and represents the social and external aspect of self-esteem on Maslow hierarchy. The growth needs are self-growth and personal development which compares with self-actualization hierarchy needs. Herzberg motivation hygiene theory deals with two factors and looks at motivation sources that are key to accomplish work to be done (Hall & Williams, 1986). The one factor are the motivation factors that cause job satisfaction and the other factor are the hygiene factors that cause dissatisfaction. The theory also states that the opposites of dissatisfaction is not satisfaction, rather no dissatisfaction. Work satisfiers deal with the factors that come into play when doing the work, while work dissatisfies deal with the factors that define work context (Herzberg, 1987). The satisfiers were categorized as growth, achievement,

advancement, work and recognition while dissatisfiers or hygiene factors include salary, status, supervision and policies (Herzberg, 1959). According to Herzberg hygiene factors cannot motivate but will only dissatisfy which will have a negative effect on production in a firm. Motivators are difficult to measure as compared to hygiene. Since managers concentrate more on hygiene factors than motivators employees tend to look for more of the hygiene factors (Hamner & Organ, 1978) which turns out to be counterproductive to the attainment of organizational goals. MacClelland theory is built on Maslow hierarchy of needs in early 1960 and came up with three needs namely power, achievement and affiliation. Achievement needs deals with independent mastery of ideas and other people and to enhance self-esteem through use of the talent possessed (Greenough et al., 1987). Affiliation needs focuses on the need for and appreciation, recognition, friendships, social groups belonging, need to be liked and to be held in much esteem. These are team players and may be ineffective leaders (Michael, 2006). In human behavior it is presumed that good behavior will attract rewards and recognition (Herzberg, 1976). Authority or power need is to control somebody else work. There is passionate need to lead and achieve certain results through coercion on the workers. There is desire to enhance status and prestige. A person would want to control and lead others (Michael, 2006). An effective manager should understand what kind of motivation would drive employees to achieve desired results. The motivation theory underpins the human capital competency variable where employees require to be motivated in order to produce the desired results.

2.2.4 Prospect Theory

Prospect theory asserts that human beings dislike incurring losses but like situation where they make a profit. The theory is therefore referred to as risk averse theory (Alam, 2022). People like to take risk to avoid a loss rather than to take risk to achieve an equivalent gain. A behavioural

model helps us to pick between alternatives that involve certainty and uncertainty risk showing the likelihood of obtaining losses or gains. Prospect theory assumes that gains and losses are viewed and valued differently and therefore people make decisions based on the gains that are perceived rather than the losses that are perceived. Prospect theory is also referred to as loss averse theory and holds that if two options are presented before an individual, one in terms of gains and another in terms of losses, the one on gains was selected. Expected utility theory is the traditional prospect theory whereby it holds that people are rational and consider the utility of a situation and make an optimal choice at the specific time, this theory however ignores the aspect of risk aversion. Prospect theory by Kahneman and Tversky (1979) succeeded the utility theory and held that there is risk in decision making. That there is decision under uncertainty of risk and decision under certainty of risk. People tend to focus more on profits or losses rather than the growth of net assets or decline in net assets. They also assert that people tend to be risk averse to gains but risk focused when it comes to making losses. They become less particular in decisions to make gains but are very sensitive and critical in decision making where a loss is anticipated. More attention is put to avert a loss and almost no attention when a gain is imminent. Further, losses and gains are treated in different ways. Losses are viewed as more likely to occur than gains/profits. Prospect theory hold that people make decision based on variation from reference point rather than base the decision on the level of net assets. Prospect theory is characterized by certainty whereby in the event that individuals are presented with various options to choose from they will select the one with certainty. That is the one without risk. People are also less interested in the final wealth but on profit or losses that may occur. There is also tendency of less reaction by people on less likely events to occur. Prospect theory addresses the expectations of owners and stakeholders of the

universities in terms of financial performance which is an indicator of failure or success of the universities in the long run.

2.3 Empirical Literature Review

The review provided here below are the findings on the researches carried out by different scholars and authentic reports. They are sourced from journals, books, reports and other materials that are related to the previous research on variables of the study. This review was intended to cement the research gap as stated in problem statement.

2.3.1 Financial awareness and Financial Performance

Financial awareness is synonymously used with financial literacy. In measuring financial awareness focus was given to financial knowledge and attitudes (Tuffour et al., 2022). Formal and informal education on financial matters equips the trainee with both financial awareness and financial literacy. Financial awareness ignites an individual to consider compliance on financial principles and policies in an institution. Financial awareness causes people to be cognizant of the existence of financial management tools and regulations. Where there is compliance it is expected that the financial performance will be enhanced.

Bahovec et al. (2017) did a research on the finance awareness and its effect on finance performance. Sample for research was on financial product consumers in Croatia. They focused on gender and the extent of finance awareness and its effect on the financial deliverables on selected financial consumers. 120 respondents were picked from population of 640 which was selected randomly from Croatians. The awareness was measured by among others awareness of loans and risk. On other hand financial performance was measured by financial stability and budget which entails the income and expenditure projections. The findings showed that gender had effect on financial performance whereby when men and women are financially exposed the same level,

men had a higher positive impact on financial performance than women. Women with higher financial awareness level did not translate to enhanced financial performance. This means women do not fully utilize the awareness they hold to maximize on financial investments for higher profitability. This exposes women to a higher financial risk. Further, there was conclusion by the study that financial awareness levels bear major effect and relationship on the individual Croatians finance performance (Bahovec et al., 2017). The sampling was not adequate considering that financial consumers in Croatia are not only 640 and therefore research on bigger sample to enhance representation is necessary. It is clear that this research focused on individual approach rather than institutional approach which retains the Public Universities corporates as a grey area for research. Menike (2019) conducted a research to “determine effect of financial awareness by owners on financial performance of SMEs in Sri Lanka”. In his research, Menike measured financial awareness with financial influence, behavior, knowledge and attitude of their SME performance. The target population were all the Small, Medium Enterprises (SMEs) in Sri Lanka. Data were obtained at a particular time with the data collection tool. The sample was determined through stratification. Out of the population of 81,531 SMES, a sample of 378 SMES were selected based on various categories like manufacturing sector and then narrowed to districts across Sri Lanka. The study then focused on manufacturing sector only. Data was collected and analyzed. A response of the 378 sampled respondents was 100%. From the study it was established existence of high positive relation between financial awareness and finance performance of SMEs. Measurements of variable were financial knowledge, influence and behavior. However, attitude on financial matters did not have significant statistical impact on the SMES in Sri Lanka. The study also showed that SMES that are run by entrepreneurs who are financially well versed performed better, (Menike, 2019). This is because they apply financial planning which assist in reduction of

operational costs thus increasing the profit realized. Further, he found out that financial awareness enhances savings, diversification of assets, risk mitigation through insurance, prudent debt policy and promotion of creditworthiness and overall expansion of the SMEs which spur economic development through creation of employment and exchange of goods and services. This was a resourceful study but limited to private sector. Public Universities operate under different sector with unique environment both internal and external. Effect of the same variables in public set up may produce different results and therefore the need to research on them under the perspective.

Shaturaev (2023) in his research on effect of financial awareness on survival of business entities specifically in Canada, found out that, if level of finance awareness gets higher, probability of preparing financial reports by businesses also goes higher. Further, the businesses that produced financial statements were able to manage their debt properly and were less likely to close down their businesses. These findings were based on data collected from a sample of 509 business startup entrepreneurs in Canada. Our Public Universities are in the threat of closing down some already having closed their satellite campus. Kenyatta University being one of them having closed Ruiru campus.

Hamida et al. (2020) in research on “effect of financial awareness on financial performance of Micro and Small Medium Enterprises (MSMEs)” focused in Depok City in Idhonesia. The target population were all owners in Micro, Small and Medium Enterprises of Depok City West Java in Idhonesia. By use of Slovin formula a sample of 286 was selected using probabilistic method. The data was obtained by using questionnaires and was analyzed. Findings were that financial knowledge and attitude have significant effect on financial performance. The former enhance owner’s ability to make prudent financial decisions which boost the final financial performance of MSMEs as measured by profitability and accumulation of assets for future growth. The overall

conclusion was that with more financial awareness to the owners there is improved financial performance of MSMEs. The research again fails to cover the public aspect of entities and thus the need for research on public entities specifically Public Universities.

Mawad et al. (2022) looked the “effect of financial awareness on Lebanese individual financial performance” between period 2019 upto 2021. The survey was conducted on 328 Lebanese and the findings were that their performance were directly affected by the level of financial awareness and demographic factors. These findings were based on individuals and therefore public universities may produce different relationships and therefore the need to test the relationship to determine whether the results would be different.

Usama and Yusoff (2020) also carried out a research on “financial awareness and its effect on financial performance on businesses”. Specifically, research was on the effect of the level of awareness on financial matters on the entrepreneurs’ business performance. The research was conducted on Entrepreneurs in Bauchi in Nigeria. Klapper et al. (2012) asserts that financial literacy is a combination of various parameters which include awareness, behavior attitude, skill and knowledge that are vital for sound financial decision making for peoples common good. This was also supported by Lusardi (2013) who also holds that financial literacy is a blended attributes namely awareness, skill, knowledge, attitude and behavior in making financial decision for the good of human beings. The target population was the markets in Bauchi in Nigeria and therefore four main markets were selected and 500 questionnaires issued to the respondents out of which 393 of them were retrieved. Out of these 7 had inconsistencies and therefore the remaining 386 questionnaires were analyzed? The measurement were based on debt management, bookkeeping, risk policy, diversification and access to loans. The findings were there existed significant relation between the finance awareness and business performance. If awareness got higher, the

performance of the businesses also was higher in Bauchi Nigeria. The Public Universities in Kenya were tested on the same parameters to find out whether there are differences in these relationships. Tuffour et al. (2020) engaged in research on “effect of financial awareness on financial performance of small scale enterprises in Republic of Ghana”. Measurements of the variable were knowledge and attitude among the entrepreneurs and resultant effect on both finance and non-finance indicators of firms. Sample consisted of 200 managers of the small scale firms whose responses were collected through a questionnaire. Finding indicated major relation between financial awareness and both finance and non -finance performance. The higher awareness on financial matters the higher the performance amongst the small scale firms in the state of Ghana. This research supports other research findings in the same sector but public entities may behave differently under the same circumstances and conditions. The study on Public Universities sought to unearth the relationships in the public sector.

Kimunduu et al. (2016) studied on “effect of financial awareness on performance of SMEs in Ruiru, Kiambu County” and confirmed significant relation between awareness in finance and finance performance of these enterprises. Financial awareness is usually measured by savings, debt levels, risk and investment decisions (Rooij et al., 2007). Sample of 100 respondents from a population of 334 in Ruiru town was selected by use of stratification, analyzed and the findings and conclusions recorded. The study therefore recommended for enhanced financial awareness amongst the entrepreneurs to boost financial statements. The scope of this study is limited because Ruiru town may not represent the entire sector under the study. Again the focus on this research is on the private sector leaving out the public sector. A study on Public Universities assessed whether the relationship of the variables hold the same.

Sabana (2014) in his research towards financial awareness and performance of Micro Enterprises in Nairobi, measured financial awareness based on the savings, debts management, risk policy and investment decisions. The target population was all micro enterprises in Nairobi, but a sample of 396 enterprises was selected. This was determined by finite population formula Israel (1992) and by use of cluster sampling. Findings indicates that “financial awareness has significant statistical effect on performance of the enterprises”. It is in agreement with research by other scholars on the same sector of the economy. A study on how the variables would behave in the case of public universities performance would be of essence.

Khatib et al. (2020) asserts that “chief executive officers financial awareness have impact on corporate finance performance of micro and small enterprises in Idhonesia”. There is material and strong non negative correlation due to their mediating role of investment decisions they make and financial performance of these SMEs. This study was done on 301 managers of SMEs in the republic of Idhonesia. The financial awareness was measured by knowledge, skills, rules, regulations and operational procedures in the manual.

Culebro-Martínez et al. (2024) did research focusing on “financial literacy of entrepreneurs and financial performance”. Their study mirrored on Micro, Small, Medium Enterprise (MSMEs) in republic of Mexico. Total of 278230 MSMEs operate in Mexico. However due to logistics and cost implications 248 of them were selected. Out of these 206 questionnaires were correctly filled. Using simple logistic regression model data from the entrepreneurs from Veracruz totaling 206 in Mexico was analyzed. The findings showed that “financial behavior of the entrepreneurs have significant positive relationship with companies’ performance” while uniquely, entrepreneurs’ attitude and knowledge don’t have significant relation with small micro, medium enterprises performance in Veracruz in Republic of Mexico.

Yakob et al. (2021) in their research paper entitled “Financial literacy and financial performance of small and medium sized enterprises” found out that finance literacy has positive material relation with financial outcomes of small, medium enterprises. Target population was the SMEs in the states of Penang, Perlis and Kedah in the republic of Malaysia. The total numbers of SMEs in these states was 7012 but using simple random sampling 364 SMEs were selected for their study. Out of these, 200 questionnaires were issued to the managers and entrepreneurs of the SMEs and the data obtained was analyzed by multiple regression. Outcome of research indicated that financial literacy has material positive relation with financial results of the small, medium enterprise (SMEs).

Hererra et al. (2023) on their research paper entitled “financial literacy and micro, small and medium enterprises (MSMEs), mediation and moderation analysis” found out that the “financial literacy has positive influence on performance of micro, small and medium enterprises”. Research was quantitative in approach and focused on the MSMEs that operated in DKI Jarkata region in Indonesia. 5 point Likert point questionnaires were administered to 550 respondents from MSMEs that operated in the region of Jarkata. The data collected was analyzed by structured equation modeling and partial least squares (SEM-LSM). The findings also found out that financial literacy indirectly influences performance through mediation of finance risk attitude, access to finance and competitive advantage.

Awwaliyah et al. (2023) did study on “how financial literacy relate with financial performance of micro, small and medium enterprises in tourism sector with mediating role of financial behavior”. The results indicated that both digital finance literacy and finance behavior affect the finance results of the Micro Small, Medium Enterprise (MSMEs). Finance literacy was measured by

understanding internet banking, knowledge, concept of interest rates, working capital, P2P lending principles, financial statements, inflation and time value of money. Performance was measured by Profit (surplus), sales (revenue), human capital (employees) and working capital. The research adopted mixed design research approach with both qualitative and quantitative data. Interviews and observations methods were employed and quantitative data was collected through questionnaires. The target population were all micro small, medium enterprises (MSMEs) located in beach of Pancer, Jember Regency in the republic of Indonesia. By use snowball sampling a total of 120 respondents were selected and data collected, analyzed by Partial least squares (PLS) method and conclusion was that finance literacy improves finance results of micro small, and medium enterprise of tourism firms in Pancer beach.

Still in Indonesia, Wati et al. (2021) did research titled “effect of financial knowledge on the firm performance with moderating role of financial risk attitude”. This research adopted a quantitative approach with explanatory research approach. Financial knowledge was measured by elementary financial calculations, cash management and interest rates. While firm performance was measured by profit (surplus), sales (revenue) market share and return on assets (ROA). The targeted population were owners of micro small, medium enterprises from a village located in Melang Indonesia. 150 five point Likert scale questionnaires were administered to selected respondents based on age, turnover and training of owners of the MSMEs. Data obtained was analyzed by use of Partial Least Squares (PLS). Findings of study showed that finance knowledge have positive, material effect on the Micro and small medium entities in Melang village in Indonesia.

And in Jogjarkata, Indonesia, Kristanto (2022) carried out research on “the role of financial literacy, access to finance, financial risk attitude on finance performance of Micro, small and

medium enterprises”. Study adopted mediated regression model design. Target population was 390737 MSMEs that operate in Jogjarkata. The sample was purposively determined based on the capital, financial statements and registration of Micro small, medium entities in the region. 276 MSMEs were selected as the sample and Likert scale questionnaires administered to respondents for collection of data. The data was analyzed and finding was that “financial literacy affected the financial performance of the micro small and medium enterprises (MSMEs)”. It was also found out that financial literacy accounted for 53.4% on financial performance of the MSMEs. In other words finance performance changes is attributed to financial literacy to the extent of 53.4% represented by $R^2 = 0.534$ on financial performance.

In Afghanistan, Muneeb and Atal (2024) carried out a research on “assessing the influence of financial literacy on profitability of firms as evidenced from Nangarhar”. The research design used was cross sectional with both descriptive and explanatory approaches. Simple random sample was selected and included 90 finance officers and managers of organizations. Data was analyzed and findings were that financial literacy have significant positive relation with profitability of companies in region of Nangarhar. Specifically the results showed that debt management, saving culture, book keeping literacy, budgeting literacy and financial attitude have significant positive relation with profitability of firms.

In Ghana, Frimpong et al. (2022) did research on “financial literacy, access to digital finance and performance of small and medium enterprises” as evidenced from central region of Ghana. This study adopted quantitative research approach. Purposive sampling was applied to select 400 respondents from small, medium enterprise from Assin Fossu, Cape Coast, Mankessim, Kasoa and Agona Swedru in central part of Ghana. Descriptive statistics was computed by SPSS, Partial least

squares -Structures equation modelling (PSL-SEM) were used to analyze relations between independent, mediating and dependent variables. It was found out that financial literacy affects digital finance, then ultimately performance of the small, medium enterprises from Ghana.

Still in Ghana, but this time in Tema metropolis, Sunu et al. (2020) did a research “the effect of financial literacy on financial performance of small and medium enterprises”. Study applied quantitative design research approach which entailed descriptive analysis and regression analysis. The target population were the entrepreneurs or managers and senior employees of the SMEs who were involved in day to day operations of these firms. A sample was selected from about 150 SMEs registered with the assembly of Tema Metropolis. A sample of 109 respondents was selected purposively for data collection out of which 105 returned the filled questionnaires which were considered for analysis of data. Findings show that finance understanding and knowledge have significant, non-negative relation with finance performance.

Yeboah (2019) did research on “the effects of financial literacy on the financial performance of small and medium enterprises in Makola market in Accra Ghana”. Study applied descriptive, inferential analysis approach. The target population was 6034 entrepreneurs who operate as small scale businesses in the Makola market. Simple random sampling method was applied to select 100 traders. By use of questionnaires, which had both close ended and open questions, primary data was collected. Data obtained was analyzed using SPSS software both descriptively and inferentially. Findings showed “significant positive relation between finance literacy and finance performance of the small, medium enterprises from Makola market”. Financial literacy also affected the saving culture of entrepreneurs of small, medium enterprises (SMEs) in Makola market, Accra, Ghana.

Esiebugie et al. (2018) did research on “the financial literacy and performance of small and medium enterprises in Benue state of Nigeria”. Financial literacy was measured by financial attitude, finance knowledge and finance behavior. On other hand performance of the small, medium enterprises was measured by profits (surplus) and sales (revenue). The study adopted both descriptive and inferential research designs which entailed mean, standard deviation and multiple regression analysis. The target population was the 250 small and medium enterprises registered in Benue chamber of industries, commerce, agriculture and mines in Nigeria. Primary data was collected from sample of 154 respondents and secondary data was from the SMEs books and other records. Findings showed finance knowledge and finance attitudes have significant positive relation with small, medium enterprises.

John (2022) in his research entitled “Financial literacy and financial performance of micro, small and medium enterprises in City of Lagos Nigeria” found out that “financial literacy has significant positive relationship with finance performance of micro and small and medium enterprises of Lagos city in Nigeria”. Finance literacy was measured by financial attitude, financial knowledge and financial behaviour. On other hand finance performance was measured by leverage, liquidity and profitability (surplus). Study adopted correlational and descriptive design approach. Target population were entrepreneurs of small businesses in International market of Alaba, located in Lagos metropolis. Unsuccessful to get the registered businesses in spite of request to administration, the researcher selected 100 business owners based on the previous research where 450 of them were requested to fill questionnaires but only 100 of them responded. Of the 100 sampled respondents 68 were micro businesses, 30 were in small businesses and 2 of them were in medium businesses. Likert scale questionnaires were administered and oral interviews conducted to collect data. The findings were that “financial literacy has a significant positive

relationship with financial performance”. Financial literacy is also strong predictor of finance results of MSMEs in Alaba international market within Lagos metropolitan in the republic of Nigeria.

Still in Nigeria, Ibitomi et al. (2024) carried out research on “financial literacy and financial performance of small and medium enterprises in Abuja city, the capital of Nigeria”. Parameters for financial literacy were financial attitude, financial awareness and financial behavior. Financial outcomes was evaluated by profits, sales return on assets (ROA) among others. This study applied descriptive and exploratory research design. Target population of study were the SMEs in Abuja which were recorded at 38246 comprising the traders, artisan and service providers among others. Using stratified sampling technique and Yamane formula, sample of 396 SMEs was applied in the research. Data collection was conducted by questionnaires whereby 550 of them were randomly distributed to the owners of businesses out of which 501 of them were returned and were confirmed usable. Data was analyzed and findings were that “financial literacy attributes have significant positive relationship with financial performance of the small and medium enterprises (SMEs) in Abuja City, Nigerian capital”.

Jemal (2019) did research titled “the effect of financial literacy on financial performance of medium scale enterprise a case study in Hawassa City in Ethiopia”. Financial literacy parameters were debt management, saving culture, accounting literacy and budgeting literacy. Financial performance was evaluated based on Return on assets (ROA). Study applied descriptive, explanatory design and mixed approach. Sample of 276 medium enterprises were picked through stratified random- sampling technique for the study from target population of 2139 registered medium enterprises in Hawassa City, Ethiopia. The research used both primary data sourced by

questionnaires, while secondary was got from financial accounts of medium enterprises. Data was analyzed through inferential and descriptive statistics by use of Stata version 12 software. The findings showed that all the attributes of financial literacy used in the study namely debt management, saving culture, accounts literacy and budgeting literacy have significant, positive relationship with finance results of the medium enterprises.

Edward and Claude (2024) did research on “the effect financial literacy on the financial performance of small and medium enterprises”, case study of Nyarugenge District in the republic of Rwanda. Financial literacy was measured by book keeping, financial planning and access to finance. Finance performance was on other hand measured by sales (revenue) growth, return on assets, and (ROE). Research adopted both correlational and quantitative research design. The target population were the small, medium enterprises in Nyarugenge district in Rwanda. The sample of 211 SMEs was selected and respondents were purposively selected from all the sectors and a 100% response rate was achieved. After analysis of data, findings were that all parameters of financial literacy had significant positive relation with finance performance and therefore it was concluded that finance literacy has significant, positive relation with financial results of SMEs in Nyarugenge district of Republic of Rwanda.

Nurlianti and Qhodriyah (2022) carried out research on “the effect of financial literacy and financial inclusion on the micro small and medium enterprises (MSMEs)” Bangkalan District. Financial knowledge was measured by ease of access to credit and repayment, while financial performance was evaluated by profit(surplus), sales(revenue), capital (total net assets) market share and human capital. The research adopted quantitative and inferential statistics. The target population was 22500 MSMEs from all sectors in the market in the Bangkalan district in the

republic of Indonesia. Questionnaires were administered to the respondents for collection of data. The data was analyzed and the results were that finance literacy has no significant relation with finance performance. This was attributed to the effects of Covid -19

Priyantoro et al. (2023) did research titled “the effect of financial literacy on business performance through mediation of financial access and financial risk attitude”. The research used explanatory research design. Using purposive sampling and Solvin method, 400 respondents were selected for the study from the identified Tofu processing industry, Tediri City in Indonesia which had operated for one year or more and had a turnover of 10million and 2.5 Miilyar. Data was collected and analyzed using structural equation modelling and Partial least squares method (SEM- PLS). The findings were that financial risk attitude and financial access affect financial performance of the business. The more access to finances, higher financial risk attitude, the higher the business performance entailing financial performance aspect.

Mashizha et al. (2019) carried out a research on “financial literacy among small and medium enterprises (SMEs) in Zimbabwe”. They assert that financial literacy is integral to making intelligent financial decisions in daily operations of SMEs. Financial literacy plays an important part in order to achieve development and economic growth (Bongini & Zia, 2018). The research was based on quantitative design approach. Target population was small, medium enterprises (SMEs) in both Bindura and Harare Districts. By use of multi stage cluster sampling method, 400 managers and owners of SMEs were selected from the two districts for the study. The questionnaires were administered to the selected owners of the SMEs. Out of the 400 questionnaires that were given out, 278 were dully filled which represented a response rate of 70 percent. SPSS version 22 was used for analyzing data that was collected. Factors that were

observed to affect financial literacy were inflation and interest rates and financial literacy levels were generally low especially to the youth and the aged. It was observed that performance is affected by the level of financial awareness/literacy.

Meitriana et al. (2022) carried out a “narrative review on social capital based financial literacy on business performance”. This research focused on the articles that discussed micro small, medium enterprises in immediate previous ten years in terms of social capital, financial literacy, effect of social capital on business performance among Indonesian or English articles. The findings were that financial literacy enables the proprietors of these businesses to make sound financial decisions which affects the business financial performance.

Gunawan et al. (2023) in their research paper entitled “Improving Micro small and medium enterprises (MSMEs) performance through financial literacy, financial technology and financial inclusion” found out that three variables affected financial performance of MSMEs. This research applied a quantitative design approach. The target population was all the 773 MSMEs in Medan City in the republic of Indonesia. To determine the sample, purposive technique was used in selection of 200 MSMEs and Likert scale questionnaires were administered for collection of data. Using structural -equation modelling with Partial -least squares method (SEM-PLS), the data was analyzed. Findings were “there was positive relationship between financial literacy and financial performance”. However, relationship was found not to be mediated by financial inclusion.

Sohilauw et al. (2021) did research on “the relationship between financial literacy, rational financing decision and financial performance, an empirical study of small and medium enterprises in Makassar city”. The research adopted a survey approach on the SMEs. Using cluster method, stratified sampling technique and using Slovin formula, 400 respondents were selected. The

questionnaires were administered to 400 respondents from which 279 questionnaires were well filled. Inferential and descriptive statistics was computed based on data that was gathered. Research on such relationship in Public Universities set up in Kenya would be of interest considering their persistent poor financial performance of the Universities over the years.

2.3.2 Human capital competency and Financial Performance

Human capital is undoubtedly fundamental in any organizations as human being are the drivers and implementers of intended purposes within and without the organization for attainment of the set objectives. Human capital can be measured by the ability to transform ideas into resourceful tools in order to achieve the desired products. Human capital is commonly used interchangeably with intellectual capital. This is supported by the use of the same measurement for both human capital and intellectual capital.

Nasif et al. (2018) investigated “the relationship between human competency and how banks perform in republic of Turkey” for period of 10 years starting 2005 to 2014. In their study they measured human capital by value addition by human capital and efficiency in human capital management. The target population was 52 banks in Turkey but a sample of 44 banks were used for the purpose of collection of the data. These banks comprised of deposits, investment and participating categories. The study found out that human capital in banks in turkey is affected by efficiency of human capital. Efficient application human capital enhanced the financial achievements of these banks. An analysis of human capital and performance of public universities would be a focus to determine whether the relationship differs.

Kim et al. (2016) studied moderating effect of human capital on effect of feedback on organizational performance. The target population was 8879 employees in South Korea out of which sample of 253 employees was selected for purpose of their study. Findings were that

feedback had effect on performance of the organization through human capital besides sharing of knowledge. In their study, human capital is considered as moderating variable but in the Public Universities study it was an independent variable effect on the finance performance.

Sardo et al. (2018) did research entitled “the effect of human capital on financial performance on small and medium hotels financial performance in the Republic of Portugal”. The human skills and interpersonal relationship measured the human capital. The sample was 934 firms from Portugal SMEs for a period of 9 years from 2007 to 2015. The findings showed a strong positive relationship in small and medium size hotel in the country. The study was on a sample in Portugal and therefore the findings may not hold for Africa and specifically in Kenya. Further, the firms under review are from private sector the reason why the proposed study is on Universities in the Public Sector to determine how the same variables relate.

In another study by Sardo and Serrasqueiro (2018) on non-finance firms that are listed in 14 different countries in West of Europe they sought “to determine the effect of human capital on financial performance”. This study focused on period from 2004 to 2015 translating to 10 years. Human capital was found out to be key in value creation of the firms. It is an important resource in the firm’s wealth though not recorded as assets in the book of accounts.

Bontis et al. (2018) did research in Italy titled “effect of human capital on financial performance of cooperative societies”. The human capital was measured by human skills, interpersonal relationship and structure of capital. The research was on a sample of 151 social cooperatives in Italy. Findings indicated positive relationship between human capital and economic performance which was greatly affected by presence of University graduates and value addition in human capital.

Rusmingsih et al. (2021) in their research in Malaysia and Indonesia. Still on human capital effect in the hotel industry holds “that there is significant relationship between the two variables, the independent and dependent variable”. Human capital was measured by two parameters namely expertise and work comfort. The study was carried on content basis of the secondary data from reports and other reliable sources in the hotel industry.

According to Helin et al. (2018) “human capital has positive relationship with organizational performance in Indonesia”. They measured human capital with value added human capital, value added capital employed, and structural (cultural) capital value addition. The target population was 34 companies in which a sample of 102 respondents were purposively selected. Data for 2014-2016 was analyzed to arrive at the findings.

Xu et al. (2019) studied on “human capital and financial performance of agricultural listed companies in China”, views human capital as an integral resource that enables a firm to attain competitive advantage in a rigorous competitive market. They used capital employed efficiently (CEE), structural capital efficiency (SCE) and human capital efficiency (HCE), as parameters to measure human capital. They measured financial performance with profitability and company efficiency. The findings showed that the quality of earnings by the companies were influenced by SCE, CEE and HCE. On the other hand profitability has positive relationship with CEE and HCE. Company’s efficiency related positively with capital employed efficiency, but negatively with human capital efficiency. They concluded that human capital is major factor in contribution to growth of Chinese companies in Agricultural Sector.

Isanzu (2015) carried out research “on effect of human capital on financial performance of banks in Tanzania”. Human capital was measured by structural capital efficiency (SCE), capital employed efficiency (CEE) and human efficiency. A sample of 31 banks was selected and the

secondary data for financial statements for the period 2010 to 2013 was analyzed. The findings recorded positive relation between human capital and finance outcomes of the banks.

And in Nigeria, Onyekwelu et al. (2017) researched on “effect of human capital on financial performance in banks, Nigeria”. Finding was that “human capital has a significant effect on the performance of the banks”. Human capital was measured by competences, abilities and skills of individuals. The sample was 3 banks in Nigeria. The data analyzed was secondary data from financial statements for a ten year period from 2004 to 2013.

Dearden et al. (2014) researched “the effect of human capital resource on financial performance of listed oil and gas firms in Nigeria”. Human capital was measured by training and development costs. The target population was the 14 oil, gas firms from Nigeria but 12 of them were selected and their secondary data from annual reports for 11 years from 2011 to 2021 was retrieved and analyzed. The findings revealed presence of strong positive relation between development and training costs and financial results of firms and reduces inefficiencies in productivity.

Still in Nigeria, a more recent research, Ofurum et al. (2023) on “effect of human capital on financial performance of Deposit Money banks in Nigeria”, found that “both human capital and structural (cultural) capital had a positive relationship with the financial performance. The higher the human capital skills, the higher the financial performance”. Data that was collected were from secondary source of published accounts of eight banks in Nigeria for the duration 2012 to 2020.

Zhang et al. (2021) in their research on “human capital and financial performance, a comparison with pharmaceutical and financial industries in Vietnam” hold that value added human capital, human capital efficiency had positive relation with financial performance of industry. The human capital was measured by parameters that included HCE, SCE, and value added human capital. Data was collected on a target population of 149 firms in Vietnam out of which 108 firms were from

financial sector and the balance of 41 firms were in the pharmaceutical sector. In the same report the structural (cultural) capital efficiency showed negative effect on return on assets.

Tarek and Anas (2017) view human capital as measured by adaptability and flexibility, individual competencies, employability and organizational competencies. The two authors reviewed literature on “the effect of human capital on organizational performance”. This review showed evidence of relationship between the two variables. This study cut across different sectors of the industry and the findings were therefore general not relating to specific sectors for ease of comparison.

Bernstein and Beeferman (2015) assert that human capital is key to corporation strategy in their paper “The materiality of human capital to corporate financial performance”. They viewed human resource policies and employees as measures of human capital. These two parameters were found to be materially related. Training was measured by money spent on the same. On financial performance they considered parameters to include return on assets, total shareholder return, profitability, return on capital employed, Tobin Q and return on investment. Tobin Q measures the undervaluation or over valuation of a firm. The study was a review on the literature of the same variables. The review is clouded as it cuts across all the types of corporations in different sectors, both private and public that were studied.

Arif et al. (2022) in their research on the assessment of human capital on manufacturing firms found out human capital affects the financial performance in manufacturing firms. Measures were the human skills and structural (cultural) capital. The data was sourced from internet and related to the period 2017 - 2019.

Further, Munjuri et al. (2015) assessed whether human capital influences performance of insurance entities and commercial banks. Census was conducted on the 45 registered insurance

companies and all 43 licensed commercial banks. Target population was human resource managers in banks and the firms whereby 88 questionnaires was issued with response of 61% rate. The study found out significant statistical influence on non-finance outcomes of insurance firms and banks. This study was limited to non-financial performance which excludes the financial performance.

Asutay and Ubaidillah (2023) studied “human capital and the financial performance of Islamic banks”. The human capital competency was measured by modified added intellectual coefficient which is an enhancement of coefficient in value addition intellectually. The data was collected from 49 banks for the period 2014 to 2018. They revealed that human capital had statistical relationship with financial performance specifically profitability and less significant to productivity.

Mehdi (2021) carried out census survey on impact of human capital on corporate profitability. He measured human capital using employee satisfaction, knowledge and innovation. The target population was companies in the whole world but a sample of 224 companies was picked from 300 top companies that were found to be most profitable. The data was collected from the digital competitiveness, fortune site and global entrepreneurship monitor reports for the period 2013-2019 translating to 5 years. The results showed positive relation between aforementioned measurements of human capital in his study and overall corporate profitability. Human capital competency and financial performance of public universities, Kenya was an area of interest and the relationship was tested to determine the status as the studies above do not address the gap.

Calen et al. (2024) concentrated on the extent that finance performance of government firms is affected by e-government, human resource competency, and sound corporate governance. Data was obtained by distributing online questionnaires to 590 managers of government companies who were chosen using a straightforward random sampling technique. The online questionnaire was

created with statements itemized on questionnaire with range of Likert scale from 1 to 7. Study's findings demonstrated that employee competency and e-government both had “a favorable and significant impact on financial performance”. Furthermore, financial performance was positively and significantly impacted by effective governance. Whereas the current study concentrated on public universities, this study concentrated on government companies.

Fauzan et al. (2019) examined “the impact of information technology as moderating variable on the financial performance of schools”, with an emphasis on the quality of budgeting and human resource competency. The participants in study were students from each of the 42 vocational high schools in the Pematang Rejang Regency. This study's design employed a quantitative methodology with hypothesis testing. Using the SPSS application tool, test the hypothesis using multiple linear regression analysis and absolute difference. Analysis's conclusion demonstrates that the effectiveness of the school's financial human resources, information system, and budgeting have non negative, significant impact on finance outcomes of institutions, either simultaneously or in part. Information technology significantly and favorably modifies impact of budget quality on finance performance of educational institutions. Information technology, however, has little effect in reducing impact on budget quality on finance performance of schools. There is a methodological gap in the study because the study design used hypothesis testing. Research design for study was explanatory in nature.

The effects of employee competency, job happiness, organizational culture adaptability, and human resource flexibility on employee performance were the main topics of Sabuhari et al. (2020) study. The study also looks at the indirect relationship that exists between employee performance and the flexibility of human resources through the mediation of organizational culture adaption

and the impact that competence has on performance through the use of job satisfaction as a mediator variable. Employee performance was found to be highly influenced by job satisfaction, employee competences, and human resource flexibility; however, organizational culture adaption had no discernible impact on employee performance. Consequently, employee performance was not mediated by organizational culture adaption in relation to impact of flexible human resources. Nonetheless, a portion of relationship between employee abilities and performance is mediated by job satisfaction. While current study concentrated on university performance, previous one concentrated on staff performance.

Alhamad et al. (2019) concentrated on how human capital—that is, knowledge, skills, and competency—affects the performance of organizations. The current study evaluated the 533 valid surveys using structural equation modeling (SEM) and PLS software. This was done in order to evaluate the suggested model based on human capital characteristics and ascertain “its effect on the performance of public sector organizations in the United Arab Emirates”.

Organizational performance is covered by the dependent construct. The study clarified how the different notions related to one another. This research has enhanced our understanding of the significance of human capital. The study's findings indicate that independent variables can predict an organization's success with a 32.8% variance. The findings might provide further information about improving the effectiveness of public organizations. This study centers on public universities, whereas the previous one concentrated on the public sector in the United Arab Emirates.

Study done by Indiyarningsih (2020) examined impact of information technology utilization, work

culture, and human resource competency on employee performance. Approaches for gathering data that include non-participant observation, interviews, and surveys. The Aparatur Sipil Negara in the Badan Kepegawaian Daerah Kabupaten Lumajang is the study's population. When employing a census or saturated sampling method. due to the fact that there are 49 ASN, or fewer than 100 individuals. Thus, in this study, a sample of the total population is taken. The findings demonstrated that information technology utilization had an impact on worker performance. Employee performance has been shown to be directly and significantly impacted by the usage of information technology, according to the analysis and hypothesis testing results. The availability of information technology is one factor that determines performance improvement when technology has become a need. Employee productivity and accuracy will depend on how well the task fits the technology being used. While this study concentrated on public universities, previous one concentrated on employee performance.

The areas of emphasis for Indiyati et al. (2021) were employee performance, organizational culture, and human resource competencies. “The purpose of study was to evaluate and assess the relative effects of organizational culture and human resources on employee performance at Bio Farma”. A quantitative approach was used to carry out this investigation. Methods of gathering data: 300 employees were sampled and a questionnaire was given to Bio Farma staff members. Path analysis was utilized to test the research findings. The findings indicate that, either partially or concurrently, organizational culture and human resource competences have a major impact on worker performance at Bio Farma. While this study concentrated on public universities, the other one concentrated on employee performance.

In a developing market, Tran and Vo (2020) concentrated on “the effectiveness of human capital and company performance across industries”. In order to better understand how human capital efficiency affects company performance in 12 different sectors of Vietnam economy between 2011 and 2018, this report was written. This paper employed generalized, method of moments (GMM) methodology. Paper's empirical findings unequivocally show that human capital efficiency boosts business performance in all Vietnamese industries. Furthermore, contrary to popular belief, banking industry doesn't possess highest degree of human capital accumulation, according to the paper's findings. Within the Vietnamese economy, different sectors exhibit varying levels of human capital efficiency; the oil and gas and energy industries exhibit the highest levels of this attribute. The study was done in Vietnam, whereas Kenya will host current investigation.

Otoo and Mishra (2018) concentrated on “how employee competences play a mediating role in the relationship between the performance of the hotel business and human resource management (HRM) practices”. Analysis of Confirmatory factor was used to determine dimensions' reliability and validity. Findings suggest that some HRM procedures have an effect on employee competences, which in turn affects organizational performance. Yet, performance reviews and career planning had little effect on the employee competencies of companies being investigated. The study was done in hotel sector, and analysis was based on cross-sectional data that isn't suitable for extrapolation to other industries or international contexts. The study's conclusions may be able to assist stakeholders and hotel management in implementing appropriate and clearly stated HRM practices in order to develop human capital and encourage the essential behaviors that provide an advantage to the business. This study add to pool of knowledge on human resource management by combining employee abilities and HRM practices into a thorough research model that affects

organizational performance. The performance of the hotel business was the subject of the study, but public university performance will be the focus of the current investigation.

“The impact of HR expertise and intellectual capital on the success of MSMEs in Sasirangan Craftsmen” was the main topic of Sampurnawati and Agustina (2021) study. The aim of this specific research was to characterize capabilities of intellectual capital, human resources (HR) and the performance of MSMEs that produce Sasirangan, a traditional textile from South Kalimantan. Examine how performance of Sasirangan MSMEs is affected by degree of expertise in intellectual capital and human resources (HR). Analyzing intellectual capital and human resource competency has a significant impact on Sasirangan SMEs' success. Using a complete sample technique to obtain 40 respondents for an associative study. Multiple linear regression analysis was performed in data analysis process. Findings demonstrated that the performance of MSMEs was positively and significantly impacted by the expertise of intellectual capital and human resources (HR). Of the two variables affecting Sasirangan MSMEs, intellectual capital has a greater effect. While current study concentrated on public universities, the previous one concentrated on MSMEs.

Otoo (2019) examined the role that employee competences play as a mediator between HRM practices and organizational performance. By integrating key components from the body of current literature, an integrated research model was created. A questionnaire was used to gather information from 600 employees of the chosen hotels. The structural equation modeling method was used to assess the model's and the hypotheses' validity. Confirmatory factor analysis is used to determine the dimensions' reliability and validity. The findings suggest that some HRM procedures affect employee competences, which in turn affects organizational performance. Study also showed that association between HRM practices and organization outcomes are mediated by

employee competencies. The moderating factor was disregarded in the study.

Alnoor (2020) concentrated on the aspects of human capital and business performance, with knowledge management playing a mediating role. The information was gathered using well-structured questionnaire. Five point Likert scale questionnaire was used to gauge how agreeable response was to assertions. The study's sample size consisted of 342 responses that were gathered from Iraqi SMEs' owners. Partial least square - structural equation modeling, (PLS-SEM) was used to analyze relationships between the variables in structural model that was created to relate them. The results point to the HC-dimension's favorable and considerable influence on firm survival. The findings also point to knowledge management's potential mediating role in the association between business survival and the HC-dimension (education, skills, and training). The moderating role was disregarded in the study.

“The impact of organizational learning and human capital on performance, as mediated by organizational competency”, was the main topic of study for Damayanti and Hadita (2021). 75 respondents in all, each employed by three MSMEs in Jakarta, made up the study's population. A saturated sample is the method of sampling that is employed. Primary and secondary data are the two categories of data used in this investigation. Methods for gathering data that include surveys, in-depth interviews, and observational methods. The two primary components of the analysis technique are measurement model and structural model. The following conclusions are drawn from research data analysis results: Organizational Competency does not directly affect the Performance of the Company; Organizational Competency has positive, significant effect on Organizational Competency; Organizational Learning has positive, significant effect on Organizational Competency; Human Capital had positive, material effect on Company Performance mediated by

Organizational Competency. While this study concentrated on public universities, the previous one concentrated on MSMEs.

Zhang et al. (2023) examined the moderating role of organization politics as well as the continuous mediating effect based on organizational identity and self-efficacy in order to examine how human resource director (HRD) competency affects the performance of exponential organizations. 570 HRDs in exponential organizations were evaluated using five scales: competency, organizational identity, self-efficacy, organizational politics perception, and exponential organization performance. The relationship between HRD competency and exponential organization performance was investigated using structural equation modeling. According to our research, HRD competency drives exponential performance gains in organizations, and self-efficacy and organizational identity act as ongoing mediating factors. Furthermore, the association between HRD competency and organizational identity is negatively moderated by organizational politics. The results add to and broaden accumulation of knowledge about influence of HRD expertise on the performance of exponential businesses. They also offer a theoretical framework and empirical backing for comprehending and assisting organizations in making strategic decisions. The moderating factor was disregarded in the study.

Eskindarov et al. (2020) concentrated on the capabilities of human capital in high-tech and knowledge-intensive economic sectors. In order to develop a model of the formation and development of a leader's competencies in the field of human capital management during the course of his professional activity, as well as a model for the development of leadership institutes, the study set out to identify the salient features of a manager working in high-tech and knowledge-intensive industries. The writers stuck to the fundamental notion that graduates' broad professional and personal attributes that employers value should be evaluated, together with their knowledge,

skills, and abilities that they developed while attending college. Desk research and sociological analysis based on methodical and integrative approaches are the primary applied methods. Studies indicate that gaining information and skills via education might enhance an individual's cognitive functioning and increase productivity. Individuals with higher levels of intellectual capital will be more productive at work and able to make better use of their potential. The study's dependent variable was performance, although its focus was on knowledge-intensive economic sectors.

Study done by Mirčetić et al. (2022) concentrated on impact of green competences on organizational performance within the framework of creative human resource management. Study examined the relation between willingness moment and green skills' impact on organizational performance using the customized green competencies conceptual model. To overcome these challenges, this essay created a novel approach to human resource management. An individual's willingness is influenced by their attitudes toward green behavior, their natural green competencies, and their acquired green competencies. In addition, despite differences in their perspectives and comprehension of environmental conservation, university students participate in environmental protection. To improve students' comprehension of this crucial matter, there is still much more that can be done. To boost green performance, colleges and students alike should put in more effort to encourage eco-friendly behavior and green capabilities. Moderating variables were disregarded in the investigation.

In order to enhance employee competency, Diatmono et al. (2020) concentrated on training and development as well as human capital analysis in talent management programs. Their case study was the BSG Group. 2019 saw the qualitative research at BSG Group (6 companies) conducted using a case study methodology. Participant observation was used to gather the data, and methods included observation, document analysis, recording, and interviews. In order to increase

employees' competency with regard to human capital, the organization conducted data analysis to comprehend management programs. These improvements included talent management, training and development, and the use of balance score cards as a quality monitoring tool. The results from study demonstrated that purpose of training was to raise employee performance. Training is also helpful in preparing employees for higher roles and for planned promotions. Training and development processes may be broken down into four components that businesses can use to accomplish related tasks. In contrast to the current study, which is quantitative, the study was qualitative.

Study done by Kiswili et al. (2019) “examined impact of human capital on the deposit-taking SACCOs' performance in Kenya”. A pragmatic paradigm research and a descriptive and explanatory methodology were employed in this study. The intended audience included chief accountants, finance, human resources, information and communication technology, and the 84 deposit-taking SACCOs spread throughout five Kenyan counties. According to this study, human capital significantly and favorably affects how well SACCOs that take deposit in Kenya perform. Study found that deposit-taking SACCOs in Kenya are impacted by measures of human capital sufficiency, including staff, skills, and experience. The report suggests that SACCOs establish explicit policies for the development and training of their human resources. Furthermore, SACCOs want to use training professionals and individuals more frequently to instruct their employees on important ideas in fields like customer service, security, and financial management. Furthermore, human resource policies that direct job promotion should be developed by Kenya's deposit-taking SACCO management. While this study concentrated on public universities, the previous one concentrated on SACCOs.

Jonyo et al. (2018) concentrated on developing human capital as a requirement for organizational effectiveness in Kenyan private colleges. This study used a positivist research ethic and was a correlational investigation. The 17 private universities in Kenya that have been accredited by the Commission on University Education made up the study population. The study employed the census technique, wherein frequency distributions, percentages, and means were utilized for descriptive statistical analysis, while correlations and regression analysis were employed for inferential statistics. Human capital development revealed a significant amount of variation in organizational performance, according to the study. Organizational performance was significantly predicted by human capital development. Study found significant correlation between organizational performance and development of human capital. Current study concentrated on public universities, whereas the previous study concentrated on private universities.

“The impact of human capital strategies on employee performance in Kenya's private security sector” is examined by Odhong (2018). The study design used was correlational. There were seven units of the referral hospital staff members in the population. For the sample study, 136 employees were selected as a sample. There were main and secondary data sources. A questionnaire was used for gathering source data. The instruments' validity was determined via modification and expert judgment. Regression method was used to test data and ascertain how employee performance was impacted by human capital investments. The results showed that while employee dedication and knowledge management both had favorable, significant effect on performance, training and development had no discernable impact on performance. Overall, the change in employee performance that was attributed to human capital investment was 35.1%. Research findings indicate that while employee engagement and knowledge management both positively impact

performance, training and development have no discernible impact on performance. The current study was explanatory; however, the previous study used a correlational research methodology.

Marwa (2019) examined how employee performance in Kenya's public teaching and referral hospitals is affected by human capital management, using the Jaramogi Oginga Odinga teaching and referral hospital as case study. The correlation design was used in this study. 72 senior administrative officers of the Jaramogi Oginga Odinga Teaching and Referral Hospital (JOOTRH) were the target group. The sample utilized was saturated. Considering how little the population is, the study was a census. There was use of both primary and secondary data. The respondents were asked to complete a standardized questionnaire in order to obtain primary data. According to these findings, WO significantly improves EFY, EFS, and EWQ, whereas 13.3% of the variation in JOOTRH employees' performance may be attributed to HCM, which is based on WO. It is concluded that HCM as a whole influences employee performance and that WO predicts EFY, EFS, and EWQ. While this study concentrated on public universities, the previous one concentrated on hospitals.

“The impact of human resource information systems on worker performance in Kenyan independent commissions” was the main topic of study (Mutio & Samuel, 2022). In the study, descriptive research design was used. Employees at the management and non-management levels of each independent commission served as the observational unit. Thus, the 1426 employees of Kenya's fourteen Independent Commissions were the study's target group. Both qualitative and quantitative data were gathered for study. Quantitative data were analyzed by descriptive statistics including standard deviation, mean, frequencies, and percentages, while qualitative data analyzed by content analysis and presented in prose. Figures and Tables were used to display the results. To

evaluate degree of link between independent and dependent variables, study performed correlation analysis. Figures and Tables were used to display the study's findings. The study arrives at a conclusion that employee performance in Kenya's Independent Commissions is positively and significantly impacted by e-recruitment. The study also finds that staff performance in Kenya's Independent Commissions is positively and significantly impacted by e-training and development. The current study was explanatory in character, whereas the previous study was descriptive.

The study "Human Capital Investment and Organizational Performance: A Theoretical Review" by Mutua et al. (2024) was conducted. The research design was desk-top. With an emphasis on human capital accumulation, depletion, and drivers, this study attempts to examine body of literature and research on human capital and organizational investment. The study examined the body of research that demonstrates the connection between organizational investment and human capital, which indicates whether a company is projected to perform poorly or well. The analysis has demonstrated that, when appropriate investment strategies are implemented, human capital buildup, depletion, and drivers all positively impact an organization's performance. The results also demonstrate that businesses that make investments in the development of their human capital anticipate business expansion, improved performance, and survival in fiercely competitive markets. The current study will use descriptive research design, whereas the previous study used a desktop research methodology.

Wanyagah et al. (2023) concentrated on how manufacturing companies who are members of the Kenya Association of Manufacturers are prepared for crises in relation to the development of human capital skills. This study applied descriptive correlational research design and embraced positivism as its research philosophy. Data analysis was executed using both inferential and

descriptive statistical approaches, while data collection was done using a self-administered questionnaire. Ordinal logistic regression was one of the inferential statistics employed in descriptive statistics, which concentrated on relative frequency distribution, means, and standard deviation. The study's findings are displayed as tables and numerical measurements along with explanations. The findings show that manufacturing firms' readiness for crises was significantly predicted by the development of their human capital competencies. The study arrives to the conclusion that manufacturing companies in Kenya need to strengthen their human capital capabilities in order to be prepared for the coming crisis. While performance will be main focus of my study, crisis preparation was the dependent variable in the previous one.

2.3.3 Procurement process and financial performance

Procurement in any given institution takes a large percentage of the budget. This ranges from procuring human capital, fixed and current assets and other services for the purpose of enhancing smooth operations and ensure achievement of the set goals. It cannot be overemphasized therefore that organizations are prone to lose substantial amounts of money in case there lacks ethical and formal structures to check on the procurement processes. Public Universities are expected to offer quality education and use their resources prudently (Meyer & Schwager, 2007).

Graells and Gideon (2016) carried a research on when the English Universities are bound by European Union(EU) public procurement rules. The parameter for measurement of the public rules governance subjection was the level of funding by the government. As long as the funding of the Universities is mainly from the government rather than tuition fees from students, the study found out that the Universities remained bound to European Union Procurement Act.

Sobhani et al. (2014) in their research on level of strategic procurement and performance of manufacturing industries in Iran, the strategic procurement was measured by skills, alignment of strategy and involvement of suppliers. The sample was all the companies that carry out manufacturing in Tehran. The findings of their research was there is relation between procurement and finance performance. Further, the relation was found to be positive. The target population was manufacturing companies in Iran and therefore the same variables were tested on Public Universities for convergence or otherwise.

Awuah et al. (2022) carried out study on how procurement process affect performance in procurement within tertiary colleges in Ghana. They measured the process by planning, controlling and monitoring. The sample for the study was form the tertiary institutions in Ghana and respondents filled the questionnaires and the data was analyzed. The findings were that the three parameters namely planning, monitoring and controlling had a significant effect on performance. They recommended for training of the members of staff in public entities on these parameters. The paper was on tertiary colleges and research on Public Universities in a different geographical region where culture differs would be of interest.

Still in Ghana, Wilson et al. (2018) researched on the examination of procurement in Universities. This was a case on one university in Accra. The measures of procurement were compliant to procurement act, transparency, efficiency and accountability. Source and secondary data were collected. Source data was through interviewing head of procurement, heads of students' council and other departments. The findings were that the management, students' leadership and other departments were keen on improving the procurement process but there existed gaps that needed to be filled.

Sangok (2018) in their study on how e-procurement has been implemented and performs in public universities, Kenya. The research focused on the extent which e procurement has been implemented, barriers of the implementation and effect of procurement performance. The population targeted was 31 Public Universities, Kenya. Findings were that e-procurement was moderately implemented, the costs, quality and flexibility were affected by e procurement and that there were barriers to implementation due to costs involved, the capacity of staff and lack of the necessary infrastructure. This study focused on financial consequences of e – procurement rather than the entire Universities.

Stella et al. (2019) in their paper titled “transparency and procurement performance of Public Universities in Kenya” focused on procurement performance. Case study was on one University. The objectives were on effect of frequent communication on procurement performance, meeting between buyer and supplier and giving of repeat orders based on procurement performance. All these were found to have statistically significant relationship with procurement performance.

Kingi and Mwangangi (2017) recommends that there should be a good relationship with suppliers for effective and efficient procurement and that there should be quality awareness sensitization by procuring entities. This was recorded in their paper on the quality of management on procurement performance in Public Universities, Kenya. Target population was user departments in the public universities where a sample of 525 members of staff in the departments was selected, data collected and analyzed for the findings. Relationship between buyer and supplier and quality awareness were found to positively relate to financial performance of the Public Universities.

Filho et al. (2019) in their literature review on sustainability and procurement practices in institutions of higher learning came up with barriers and drivers to procurement. The review was carried out on these institutions the data being collected from researchers from the same

institutions. The findings listed a number of barriers which are costs, availability of good and services to be supplied, attitude of management, evaluation criteria, lack of knowledge, and stakeholders with diverse opinions. A check on whether these barriers hold in Public Universities would enhance informed decision making.

Georgino et al. (2021) reviewed literature on procurement process and financial performance. The procurement process was measured by senior management commitment, collaboration, communication, talents, lead time, innovation, planning, risk, trust, sustainability and procurement structure. This review was on 24 articles. The findings were that the procurement process was directly and positively related to financial performances through various measurements.

Muhammed et al. (2015) published a paper on “environmental procurement strategies effect on financial performance of small and medium enterprises in the Uasin Gishu”, a county in republic of Kenya. The paper was intended to determine the degree to which these strategies affect financial results of these enterprises. The study had one independent and dependent variable which were green procurement strategies and financial performance respectively. The study was carried out in Eldoret and it adopted both stratified and random sampling on hotels, supermarkets, bars and restaurants which were the target population. Data was collected through questionnaires and structured interview. The questionnaire was designed on likert scale of five points. From a population of more than 8175 small and medium enterprises the researchers selected 80 targeted respondents from supermarkets and 197 respondents from bars, restaurants and hotels by use of stratified sampling. Data analyzed by pearson correlation, descriptive statistics, factor analysis and regression method. Results were presented using tables and figures. Findings were there was relation between green procurement strategies and financial performance of small, medium

enterprises in Eldoret. Results had $R^2=0.740$ which means that over 74% of green procurement strategies account for the financial performance of the SMEs.

Kim et al. (2015) in their paper on “the analysis of impact of strategic sourcing and e procurement on performance” found out that they both had positively affected firm’s performance. One of the parameters of measuring firm performance was financial performance. The data was collected using structured surveys by use of 5 point likert scale. The pilot survey to test the instrument was sent to buffalo a chapter of institute of supply management out of which 200 questionnaires 20 were completely filled and review was done to detect potential problems with that data collection tool. The final respondents for the research were randomly selected from supply and management chief executive officers of manufacturing firms in the United States of America and were members of institute of supplies management. The questionnaire was sent to 1950 potential respondents with a prepaid postal charges to enhance response rate. Out of these 144 responses were obtained for research because 137 others were used for data analysis. Response bias was tested using priori by comparing the firm sales, firm size between responders and non-responders and by use of Anova analysis, no statistical significance existed in the research. The research found out there was high relation between e-procurement and firm finance outcomes.

Boakye et al. (2016) carried a research on the role of strategic procurement in the achievement of the overall goal in public universities, “a case study of Kwame Nkrumah University of science and technology in Ghana”. An exploration method to test the hypothesis on the relationship between procurement and finance outcomes was used. Financial results were determined by return on assets (ROA). By use 7 points Likert scale a questionnaire was prepared and mailed to the chief executives of purchasing departments and other purchasing staff on the premise that they are most conversant and acquainted with procurement practices in the university and the performance

outcomes. The sample comprised of 30 purposive respondents from the procurement department of the case study university. All the questionnaires were dully filled and returned translating to 100% response rate. Results indicated there was a material relation between the strategic procurement and finance outcomes in public universities.

Nangpiire et al. (2024) carried out a research entitled “sustainable procurement practices and organizational performance of small and medium enterprises in Ghana”. Sustainable procurement practices was measured by, top management support, staff competence and sustainable information technology infrastructure. Performance was measured by effective implementation of strategies and competitiveness in the market. Explanatory research design was adopted. Simple random sampling was used using Yamane (1973) sample size formula to pick 332 managers and proprietors of small and medium enterprises out which 317 of them responded representing over 95% response rate. The data was collected through administration of questionnaires which were analyzed by structural equation modelling (SEM). Findings indicate there was positive relation between sustainable procurement practices and small and medium enterprises represented by R squared 38.3%. This means that the strategies account for 38.3% towards level of finance outcomes of SMEs. Balance of 61.7% is accounted by other factors which were not covered in the study.

Samoei and Ndede (2018) published a paper on “the use of e procurement and financial performance in the Ministry of Education, Science and Technology, Kenya”. In their research a descriptive design of research was used. The targeted population for the study was “the employees of the ministry of education science and technology, in the republic of Kenya”. Sample size of 40 was selected using stratified sampling and random selection sampling. Strata were procurement department, accounts department, finance department and information technology department. From these strata respondents were randomly picked from each. The data was collected through

questionnaires. The analysis involved percentages, frequencies, averages and standard deviations. Inferential statistics comprised of multiple variables regression analysis. Findings were e tendering has a material effect on financial results in the ministry with over 78% of e tendering accounting for the financial performance in the ministry of education science and technology, Kenya. E-sourcing also has a material relation with financial outcomes in ministry with e-sourcing accounting for over 61% to the financial performance in the ministry. E-ordering and e-informing were also found having a material relationship with financial results in the ministry with e-ordering and e-informing accounting for 57.8% and 85.2% respectively to the financial performance in the ministry.

Macharia (2017) carried out research in their paper on “the influence of procurement practices on financial performance in commercial banks in Kenya” using Kenya commercial bank as a case study. In their study the independent variables were resource allocation, technology advances, procurement ethics and procurement policy and dependent variable was performance of commercial banks, Kenya. Measurements for performance were sales/ revenue, customer satisfaction and market size. The research adopted an exploratory and descriptive research design. The sample of 148 respondents from finance, human resource, corporate services and procurement in Kenya commercial bank was the target. Data was obtained by using questionnaires and was analyzed by descriptive statistics. Regression method analysis model was applied and results indicate that all variables namely resource allocation, technology advances, procurement ethics and procurement policy had material, positive relation with results of Kenya Commercial Bank. Marei (2022) in the paper on effect of electronic procurement on financial performance used survey design to attain the objectives of the research. There a purposive sample of companies in Jordan with sufficient capital. Questionnaires totaling 509 were sent to these companies and had a

response of 238 responses. Out of the 238 respondents 12 were outliers and therefore omitted. Five (5) were incorrectly filled and therefore left out leaving a balance of 221 valid questionnaires. The data was analyzed and showed that e procurement had material, positive relation with company's performance. Result of R square of 0.66 of procurement means that the variables of procurement explains 67% of firm's performance. Firm performance was measured by among others cost reduction and internal efficiency.

Musoni and Gathiru (2023) did research "on the effect of procurement plan on the financial performance of public institutions in Rwanda, the case study being Rwanda Transport Development Agency". Independent variables which were basis of objectives of the study were cost estimation, terms of payment, needs assessment and quality specifications. The financial performance was measured by among others project cost, project implementation schedule and quality assurance. Study adopted both descriptive and correlational research designs. The sample comprised of 72 staff members from Rwanda Transport Development agency. Out of the 72 there were 62 respondents. Cluster sampling blended with basic random sample technique method was applied to determine respondents for purpose of collecting data. The data was both primary from respondents and secondary from authenticated sources which included audited reports of the agency by certified bodies. The findings show there is strong positive relation between procurement plan and financial results of Rwanda transport development agency.

Sun et al. (2023) in their study on the topic impact of china's national centralized drug procurement policy found out that the firms that won the bids enhanced their financial performance after applying the national centralized drug procurement policy. The sample used during the study involved 174 share listed pharmaceuticals in the Shanghai and Shenzhen stock exchanges that operated between second quarter 2018 and fourth quarter of 2021. Out of these 20 firms that won

bids were constituted to be the experimental group while the remaining 154 firms became the control group. The impact of the national centralized drug procurement policy was assessed on the experiment and control groups. The analysis was done using DID model and it was found out that the firms that were applying the procurement policy (experimental group) performed better financially than those that did not participate (the control group).

Wang and Yang (2021) conducted research “on the effect of supplier concentration and financial performance of manufacturing enterprises and mediating effect of commercial credit”. The research design was descriptive statistics, inferential statistics which involved correlation and regression method of analysis. Sample for research was selected from various industry categories from china securities regulatory commission in the period 2016 to 2018 for listed manufacturing industries. After verification of completeness and reliability of data for various companies, 3270 companies annual sample data was collected. Analysis was done and the findings were that the supplier concentration had strong non negative correlation with the firm’s financial results. Companies can enhance their financial performance by increasing suppliers’ nearness to one another as this will reduce on procurement costs for instance transportation costs. In times of financial difficulties the banks will advance credit to firms to boost their competitive advantage by meeting the day to day obligations to the customers.

Sharma and Dutt (2021) carried out research on topic “impact of supply chain management and inventory management on financial performance of the firms; An analytical review. The papers under review cutting across were for the period 2015 to 2020 majority falling in the period 2017 to 2020. The study determined whether there is relationship between supply chain management and financial performance of the firms under the study. After the analysis it was evident that there

is supply chain management and inventory management have a positive impact on the financial performance of the firms

Balin and Sari (2023) carried out research in their paper entitled “effect of green purchasing practices on financial performance under the mediating role of environmental performance. Evidence from Turkey. Green purchasing practices were measured by supplier selection, supplier collaboration, supplier development and supplier evaluation. On the other hand financial performance was measured by purchase cost, energy cost, waste management cost and environmental incidental penalties due to green procurement practices. The sample was determined from a target population of all companies in turkey. According to turkey statistical institute there were 3568000 operating companies in the year 2021. Using Taherdoost guideline the sample was determined at 455 companies. The study covered the period from 2020 last quarter to 2021 first quarter. Individual purchase managers of the sampled companies was requested to fill the questionnaire that was administered through computer boosted telephonic interview. The data was analyzed and the findings were that the green purchasing practices were positively related to the financial performance of the companies.

Islam et al. (2017) in their article “Do sustainable procurement practices improve organizational performance” did not find any direct impact on sustainable procurement practices on organizational performance. However, the study found out that there was indirect impact by sustainable procurement practices through non -financial measures on financial performance of the organization. United kingdom government sanctioned task force defines sustainable procurement as the arrangement where value for money is ensured in the entire process of acquiring goods and services to the advantage not only to the organization and economy but also to the environment within which the reach of the emissions. Financial performance was measured

by return on assets and sales/revenue. Multivariate and descriptive statistics, regression and correlation analysis were conducted. The questionnaire with a 5 point Likert scale was administered to 400 procurement managers selected using systematic random sampling cutting across all sectors including public and private sectors cutting across all fields like manufacturing, mining, banking, agriculture, construction, SMEs and services in the Republic of Saudi Arabia.

Fantazy and Mukerji (2021) in their paper entitled “An empirical study of the relationships among strategic purchasing, supply chain capabilities and performance: structured equation modelling (SEM) approach” found out that strategic purchasing and supply chain capabilities have a significant positive relationship with the financial performance of an organization. Strategic purchasing was measured by interpersonal communication, supplier relationships and partners and trustworthiness. On the other hand financial performance was measured by net profit or loss (surplus/ deficit), return on investment and sales / revenue growth. The data for the study was collected on a 7 point Likert scale questionnaire. The sample for the study was 342 cutting across all manufacturing small and medium enterprises in United Arab Emirates. To enhance response rate the questionnaire were sent to the chief executive officers with paid return envelope and 52 % of the questionnaires were filled by the managers of the companies. The data was analyzed and results indicated positive relationship between strategic purchasing, supply chain capabilities and financial performance of the companies.

Mann and Kaur (2020) in their article entitled “Sustainable supply chain activities and financial performance: An Indian experience” found out that sustainable sourcing and resource utilization are the two activities of sustainable supply chain management that have significant positive relationship with firm’s financial performance. The study was based on 100 listed companies in

India. The data from the companies was collected from PROWESS software a data centre for monitoring the Indian economy. Content and regression analysis were employed to determine the findings.

Anantadjaya et al. (2021) carried out a research on supply chain, inventory management and financial performance: evidence from manufacturing firms. The data was obtained from firms' records and interviews of the persons in charge of warehouses and logistics in procurement. The variables were order picking and warehouse performance. They found out that inventory management which is under procurement has a positive relationship with financial performance of the firm.

Firera et al. (2024) carried out a research entitled "The impact of purchasing and inventory performance on sustainable financial performance with fiscal term as a moderation factor: A case study of oil and gas industry in Indonesia." The data used for the research was from 25 contractors for the period 2018 to 2022. The data was analyzed using structured equation model (SEM) and the findings were that purchasing performance had a significant influence on the financial performance of the firms while inventory performance had insignificant influence on the financial performance. On the other hand fiscal term as moderator had significant influence of the relationships of both purchasing performance and inventory performance on financial performance in the industry.

Georgino et al. (2024) in their research paper entitled "The contribution of procurement process to financial performance: A case study of sugar energy sector" found that procurement process have a significant positively influences a firm financial scorecard report. A well-structured systematic literature review was conducted to determine the parameters of procurement process that affects

the financial results of a firm. Then a case of Brazilian industry was delved into as its leading sugarcane producer in the entire world.

Zubairu et al. (2021) carried out research on the topic “Supply chain strategies as drivers of financial performance in liquefied natural gas networks” and found out that the supply chain strategies plays a significant role in financial performance of the networks. This research adopted the analytical hierarchy process (AHP) and engagement of experts to determine the key drivers of supply chain that drive financial results. The study used both qualitative and quantitative data for the analysis

Jama and Mohamud (2024) carried out a literature review on the impact of procurement practices on the organizational performance. This review was conducted for the period 2017 to 2022 systematically on the published studies on this topic. Out of the 1639 references retrieved only 15 articles were found suitable for the review and analysis. These articles were scrutinized and analyzed and the findings were the procurement practices has a significant relationship with organizational performance. Organizational performance involved society expectations.

Chinogwenya and Utete (2023) wrote a paper “Effective procurement management and organizational performance. Perspectives of the supply chain personnel” which concludes that good procurement management improves the organizational performance. The study was based on descriptive and quantitative research approaches. The sample comprised of health sector staff in procurement department in Zimbabwe. Data was collected from 40 supply chain executives in the health organization in Zimbabwe. The data was collected by use of questionnaires.

Mwangi and Arani (2021) in their paper entitled “influence of e procurement on the performance of state corporations in Kenya” found out that e-procurement does not reduce the cost of

purchasing and does not free resources for other uses in Kenya Rural Roads Authority. The analysis adopted a regression model. Data was collected from a sample of 62 heads of procurement in Kenya rural roads authority. The response rate was at 95.2% which was quite good according to Mugenda and Mugenda (2003). It was also found out that e procurement enhances the performance of the state corporations in Kenya.

Giathi et al. (2021) carried out a research on “strategic procurement management processes on performance of public institutions in Kenya. A case study of National transport and safety authority”. The study adopted regression and correlational analysis approaches. A sample of 92 was selected using stratified random sampling method from 923 employees of national transport safety authority. The data was analyzed and the findings were that there is a strong relationship between procurement processes and organizational performance. Organizational performance involved cost reduction. Such relationships would be tested in Public Universities in Kenya to find out their inclinations.

2.3.4 Project appraisal and Financial Performance

Investment irrespective of size has an effect on how an entity performs financially. This involves prudent use of resources, financial and otherwise by the managers who are agents of the principals or shareholders. It is therefore the responsibility of the managers to put up structures that ensured checks and balances on the other players in the entire investments decision making process. To some extent other departments have stake in the investment appraisal and includes human resource department for skills and procurement department officers for professional advice.

Investment appraisal decisions is interchangeably used with capital budgeting by different scholars in the world of financial management.

Batra and Verma, (2017) carried a research on capital budgeting practices in Indian companies. They based their research on 77 Indian companies registered in the Bombay Stock Exchange. The study revealed that most corporations rely on theoretical investment practices. The internal rate of return (IRR) and net present value (NPV under discounted cashflow methods and probability (risk) adjusted sensitivity are mostly used for evaluation of projects and their selection. Weighted average cost of capital was found to be the most popular measure of cost of capital. Simulation, real options and modified internal rate of return (MIRR) were found to be less applicable. The results also affirms that non-financial factors also come into play in determination of the investment or project to undertake.

A report by Hulbert and Vammalle (2014) on the effective public investment across levels of government, they made recommendations on enhancing investment appraisal decision making, The Organization for Economic Co-operation and Development (OECD) is based in Paris, and is an international organization of 38 countries that deal with market economy and democracy. Their recommendations were coordination of public investment, strengthen the ability to invest and enhanced framework for investments. A test on existence of such recommendations in Public Universities set up would assist in improvement in the investment decisions in the Universities.

Glenday et al. (2014) in their paper on approaches to better project appraisal, listed a number of bottlenecks to the investment process as high capital projects, negative rates of return; delayed completion of projects, several inflated budgeted investments , poor operationalization phase, lack of appraisal models, incapacity, and weak project appraisal.

Marcin and Dariusz (2020) in their research on investment appraisal practices in European Union countries found out that even the largest corporations do not apply investment appraisal techniques in evaluation of which projects to undertake. These studies in their findings add knowledge on the

project appraisal and financial performance. However, they do include the relationships in public universities in Kenya and thus the relationship was evaluated.

The study conducted by Twahirwa and Njenga (2021) examined the impact of project appraisal methodologies on project performance. An Example of a Jibu Rwanda Franchise Model Project. Using a census sample technique, forty respondents from various management levels comprised the study's target population, and the descriptive survey design served as a model for the research methodology. Respondent data was gathered for the study via questionnaires, and the drop and pick method was used. The study's findings show a significant positive correlation between project performance and financial appraisal techniques. Project performance is significantly impacted by financial appraisal methodologies. The study was conducted in Rwanda, whereas Kenya will host the present investigation.

In their study, Batra and Verma (2018) examined non-financial factors in project appraisal techniques using actual data from Indian businesses. The study looks into how much non-financial consideration is given to project appraisal procedures by Indian businesses. Furthermore, it contributes to project appraisal procedures by offering a thorough framework of criteria that should be taken into account when choosing a project. SWOT analysis, customer market analysis, technological factors, social concerns, and the requirement to retain current product lines identified as significant non-financial criteria in project evaluation based on a survey of 77 listed firms. Thankfully, the majority of businesses use qualitative criteria; only 2.6% of businesses do not use this kind of factor. Additionally, technical variables, expectations from stakeholders, financial viability, social factors, strategic alignment, and external factors were found to be the primary determinants influencing project selection through exploratory factor analysis. This study was conducted in Kenya, whereas the previous one was conducted in India.

The impact of net present value investment appraisal practices on the financial performance of Kenyan cement manufacturing companies was the main subject of Kipkirui and Kimungunyi (2022) study. In order to perform the study, the descriptive research design was used. Questionnaires were employed in the study to gather data. Descriptive metrics like frequency distribution, percentages, inferential statistics, mean, and standard deviations were used to tabulate, classify, and summarize the data. The analyzed data was presented using tables and figures. According to the report, Nairobi County industrial enterprises' financial performance is significantly improved by net present value. One of the advanced methods of investment appraisal is net present value (NPV), which considers all cash flows throughout the course of a project and aims to maximize wealth. The current study was conducted in Kenya and used a descriptive research approach.

Macharia (2017) concentrated on how project appraisal techniques affect an organization's output. In order to ascertain the impact of project appraisal techniques on the organizational performance of Aga Khan University Hospital in Kenya, this research study used a descriptive survey design. Using the statistical package for social science (SPSS), the acquired data was analyzed using descriptive statistics, multiple regression, and inferential analysis. The results showed that the application of the four project appraisal approaches—economic, financial, market, and technical appraisal approaches—could account for 70.1% of the organizational performance. Consequently, this result demonstrated that the study variables have a positive association with one another. According to the results, the company would benefit from using project assessment techniques to identify projects that are most likely to be implemented successfully, resulting in the achievement of target performance and overall goals. The current study was conducted in Kenya and used a descriptive research approach.

Al-Jedaia and Mehrez (2020) research concentrated on the motivational mediating function in the relationship between performance appraisals and job performance in the public sector. The primary PA factors identified in previous literature have been prioritized in this paper, along with their effects on employee motivation and job performance. These factors include purpose (PAP), criteria (PAC), leadership (PAL), and methods of evaluation (PAE). In addition, the study aimed to close the gap in the literature regarding performance management in the context of Qatar for further investigation. A survey was used as part of the descriptive research strategy for this study. After the survey was sent out, 294 replies were gathered. The findings concluded that whilst PAC and PAL had no effect on employee motivation or job performance, PAP and PAE did. Furthermore, the results show that employee motivation and performance are positively correlated. A moderating variable was disregarded in the investigation.

Ameen and Baharom (2019) study concentrated on evaluating how employee performance in the Nigerian Civil Service is affected by performance appraisal reasons. This study proposed a conceptual prototype to address this problem, stating that performance evaluation goals will improve worker performance in the Nigerian civil sector. Through extensive review of the literature, this work provided a theoretical framework grounded in both logic and empirical evidence to address the identified research questions. The findings of this study emphasized that performance goals do have a positive impact on an employee's performance and that they are a helpful tool that organizations can utilize to increase employee productivity. This suggests that in order to enhance employee performance, organizations ought to take into account the recommendations made by the study model used in this project. This has proven to be crucial because it includes the fundamental ideas needed to motivate employees to perform at their highest level. The study was conducted in Nigeria, whereas Kenya will host the present investigation.

Kiplimo et al. (2020) examined how the performance of housing cooperative societies in the counties of the North Rift Region was affected by investment assessment. The investing philosophy served as the study's direction. The data was gathered through open, self-structured surveys and was derived from primary sources. The reliability of the study instrument was assessed using the Cronbach alpha value, and the validity was assessed using content validity. Both descriptive and inferential statistics were used to analyze the data. Frequency tables, graphs, percentages, and means were utilized for descriptive statistics; correction and inferential statistics were used for inferential statistics analysis. For the data analysis, SPSS Version 24 was helpful. The results of the study showed that the performance of housing cooperative societies is positively and statistically significantly impacted by investment appraisal. While the current study concentrated on public universities, the previous study concentrated on housing cooperative organizations.

Wambua (2018) concentrated on the methods used to evaluate investments and the financial results of small and medium-sized businesses in Nairobi City County, Kenya. With 71,195 licensed medium-sized enterprises in Nairobi County as the target population, it used a descriptive survey research design. There were 384 small and medium-sized businesses in the sample. Utilizing a cluster random sampling technique, the researcher gathered data through the administration of questionnaires. The supervisors validated the instruments. Through a pilot study, the instruments' reliability was assessed, and a Cronbach alpha coefficient of 0.7 was deemed suitable. Descriptive and inferential statistics were used to examine the quantitative data, which was then displayed in tables. The study found that financial performance is greatly impacted by the accounting rate of return. Public universities will be the main subject of this investigation.

Shaturaev (2023) concentrated on the effectiveness of investment project assessment in the advancement of creative industrial endeavors. The industry goals are taken into consideration when analyzing the efficiency of investment projects. Various methods are employed, and a calculation is provided to enhance the efficiency of projects that are put into action within the industry. Investments and innovations help the sector become more profitable, increase output, lower fixed and variable expenses, and lower the price of completed goods. The productivity ratio is a crucial metric for investors and owners to consider when selecting projects, as it is correlated with risk. In further examining the efficacy of investment projects in Uzbekistan, it is advisable to consider the following factors based on the global experience of expert evaluation of investment project effectiveness and taking into account their concepts. The current study will concentrate on performance, whereas the study's dependent variable was the development of innovative industrial operations.

Purwanti (2023) concentrated on assessing the financial and environmental rewards of green investments using a comprehensive framework. The net present value (NPV), internal rate of return (IRR), and cost-benefit analysis—which takes into account the financial impact of environmental impacts—are among the suggested techniques for evaluating green investments. The suggested approach for evaluating green investments incorporates the widely-used financial assessment instruments, Net Present Value (NPV) and Internal Rate of Return (IRR). The economic worth of environmental impacts is taken into account in the cost-benefit analysis that is part of this framework. Stakeholders can now take into account energy savings, carbon emission reduction, and the social effect of green investment initiatives thanks to these results. Performance was the dependent variable in the current study, whereas financial returns were the dependent variable in the previous one.

The empirical analysis conducted by Özturan et al. (2019) concentrated on the impact of investment appraisal methodologies on the success of IS/IT projects. Based on the literature, this study has identified eighteen assessment methodologies. Assessment methods are categorized into financial, strategic, and organizational categories using a novel categorization method that is proposed. Also suggested is a brand-new rule-based technique for estimating the scope of IS/IT projects. For 110 real-world IS/IT projects, comprehensive data on project attributes, used IS/IT assessment techniques, and project success is gathered. ANOVA and regression analyses are performed using the gathered data to look at the variables that influence project performance. It is discovered that using organization-related assessment techniques, as suggested in this study, increases project success rates. While project size, relying on intuition during assessment, and using a system development methodology do not statistically significantly affect project success, commitment to the project and the application of multi-criteria methodology do have significant associations with project success. The present study will concentrate on financial performance, whereas the previous study concentrated on IS/IT project success.

The study conducted by Deng et al. (2019) examined the environmental performance and affecting aspects of new fixed assets investment projects: an empirical analysis in China's optical valley. In order to assess the environmental performance of new fixed assets investment projects and investigate the factors that influence such projects, an environmental performance assessment methodology for new fixed assets investment projects was developed. This study uses China's Optics Valley as an example. For the purpose of assessing the environmental performances of the new fixed asset investment projects in China's Optical Valley between 2011 and 2016, the measurement model for the system was built utilizing a generalized data envelopment analysis

(DEA) with unwanted output. Eight environmental performance hypotheses were included in the multi-regression model that was created in order to identify the main contributing elements and provide specific countermeasures to support low-carbon economic development and low-carbon innovation. The findings suggested that businesses and the government might achieve better management through the implementation of new fixed assets investment project energy conservation assessments and reviews in high-tech domains. The study was conducted in China, whereas Kenya will host the current investigation.

Özekenci and Düzakın (2023) examined capital budgeting techniques applied to investment project assessment using the Top 500 Turkish Industrial Enterprises as an example. A questionnaire survey was used in the investigation. The Istanbul Chamber of Industry declared the 500 Largest Industrial Enterprises of Turkey in 2018 and 2020. The survey questions were then applied to these companies. The survey served as the study's data gathering method. Logistic regression analysis was used to demonstrate the relationship between the collected data. The results showed that a statistically significant association was found between the favored methods and the sector, age of the firm, and degree of education in Turkey's Top 500 Industrial Enterprises as well as the companies whose stocks are quoted on Borsa Istanbul (Istanbul Stock Exchange). While a significant correlation was discovered between the firm size and the preferred methods of companies listed in Turkey's Top 500 Industrial Enterprises, no significant correlation was found between the firm size and the preferred methods of companies whose stocks are traded on Borsa Istanbul. The firms in Turkey's Top 500 Industrial Enterprises had a substantial correlation with their chosen methods and exports; however, no significant correlation was seen between the firm performance and exports of the companies whose stocks are quoted on Borsa Istanbul. This study was conducted in Kenya, whereas the previous one was conducted in Turkey.

The risk evaluation of land reclamation investment projects was the main emphasis (Yurchenko et al., 2019). The goal of the project was to advance the theory of evaluating reclamation activity effectiveness based on the formulation, synthesis, and analysis of the effectiveness output of particular investment projects while taking risks into consideration. The LRIP's economic effectiveness was evaluated through an examination of the investment activities associated with the government goal program "Land reclamation development of agricultural land in Russia for 2014-2020." Sensitivity and scenario analysis are two qualitative and quantitative analytical techniques that were used to determine the investment's utility in the federal target program activities of land development while taking risk assessment into consideration. Important risk indicators in the qualitative analysis process include: rising investment costs, shifting discount rates, altering operating expenses, and changing the price at which agricultural products are purchased. It is demonstrated that the discount rate has the greatest influence on the pure present project value. It results from the future value of money's exponential dependence on this parameter. This proves that the implementation of the investment is feasible. It is shown that the risk evaluations conducted using the current instruments require methodological and normative improvements. Investment projects related to land reclamation were the study dependent, whereas financial performance was the research dependent variable in the current study.

In their study of listed manufacturing businesses in Sri Lanka, Kengatharan and Clamenthu (2017) concentrated on the application of capital investment appraisal techniques and the efficacy of investment decisions. From January to March 2017, a field survey was utilized in the study, and self-administered questionnaires were used to gather primary data from 20 randomly selected manufacturing enterprises that were listed. The study's findings showed that, for listed manufacturing companies in Sri Lanka, the use of NPV and IRR has a considerably favorable

relationship with the effectiveness of investment decisions, but DPB has a significantly negative relationship. The effectiveness of investment decisions was not significantly correlated with risk analysis methodologies. This study will be conducted in Kenya, whereas the last one was conducted in Sri Lanka.

Mogwambo and Oima (2020) concentrated on the impact of investment assessment on effective portfolio selection in Kenya's soft drink sector. The contribution of investment assessment to effective portfolio selection was the main focus of this study. With a target population of 250 respondents chosen by census technique, the study used a survey design. Secondary data about respondents' real and financial assets was gathered from their records, while primary data was gathered through an interview schedule. Research findings show a substantial relationship between investment appraisal techniques and portfolio efficiency; consequently, the application of investment appraisal techniques influences effective portfolio selection in the soft drink industry. Part analyses of the investment appraisal techniques on portfolio efficiency show that PBP has a higher significant relationship with portfolio efficiency. Investment appraisal accounts for 85.7% of investment alternatives, and their ranking is influenced by the type of investment appraisal tools applied. The present study focused on public universities, whereas the previous study concentrated on the soft drink sector.

2.3.5 Technology adoption and Financial Performance

Many companies have embraced technology as a means of enhancing efficiency and effectiveness in delivery of their services. It is expected that those institutions that have not automated their operations do so soonest possible to tap the benefits that accrue from the automated mode of delivery of the intended products and services. However, it is worth noting that infrastructure to

support the automation must be in place and requires the firms to set aside substantial amounts during budgeting to facilitate the implementation of the technology framework.

Hannon et al. (2021) carried out a research on the effect of technology in Bahrain banks. The results showed that over 70% over the banks in the island applied technology in their operations. Further, they found out that financial technology had a significant effect on the performance of all the banks in Bahrain. The study recommended inclusion of more financial technology information on the financial statements as a way of marketing technology and disclose the resources that go to the implementation and maintenance of the technology.

Liu et al (2023) carried a review of effect of digital economy on the green total factor productivity (GTFP) in China. The study was based on 278 cities in the republic of China. The data under review was for the period 2011 to 2020 cumulatively 10 years. The results showed that there is a positive relationship between the digital economy and GTFP. Digital economy improves the productivity of GTFP.

Kusuma and Christin (2022) in their paper on how technology affects performance of financial services delivery in Idhonesia found out that technology has a significant positive relationship with financial performance in the financial services delivery. Technology is a catalyst to economic development and growth. Target population was financial services' companies in Idhonesia. Using a purposive sampling method 50 companies were selected and secondary data collected for the period 2015-2019.

Further, Kamatra et al. (2022) analyzed the relationship between financial technology and performance of commercial banks in South Africa. The secondary data was collected from 5 main banks in South Africa for the period 2011-2021 translating to 11 years. The findings showed that there is a positive relationship between the technology and financial performance of these banks.

Adoption of technology would give banks competitive edge over the others in terms of market penetration and financial performance.

Farouk and Dandago (2015) sought to find out the impact of financial technology on the performance of Nigerian banks. The target population was Nigerian banks for a period of 5 years from 2006 to 2010. From a population of 24 banks, 10 banks were selected and secondary data of these banks from central bank of Nigeria and Nigeria stock exchange was collected and analyzed using panel regression model. The findings showed a relationship between technology and dependent variable in the banks. There was a revelation that heavy investment in technology led to decrease in financial performance and therefore a need to moderately invest in technology as the cost benefit analysis is continuously reviewed for timely corrective action. Daniel A, (2020) reviewed literature on electronic economy and banks in Ghana. From the existing papers he found out that most banks have adopted technology in the operations and the remaining ones were advised to follow suit in order to reduce operational costs. It was further recommended that the banks invest in infrastructure and skills to be able to embrace technology fully in delivery of services.

According to Matevu and Kerongo (2015), there is a significant relationship between technological innovations and performance of commercial banks in Kenya. The two authors focused on Equity bank as a case study. The innovations were measured by internet and mobile banking. From a target population of 240 staffs a sample of 48 members of staff was selected as respondents by strata sampling. The use of technology makes banks to be more competitive hence more profitable and therefore contributes to economic growth.

Abdullah and Khawaldeh (2020) conducted research on technological innovations on financial performance, the case study being commercial banks in Jordan. The research used both primary

and secondary data. The primary data was collected by use of questionnaires and the secondary data was sourced from Amman stock exchange data and statistics department both from the republic of Jordan. The questionnaires were administered on employees from commercial banks listed in the Amman stock exchange. The sample comprised of 11 locally owned commercial banks in Jordan. The data used in the research was for a period of 10 years ranging from 2007 to 2016. The bank's performance in this study was measured by the return on assets (ROA). The study adopted descriptive statistics analysis approach by use of t -tests and analysis of variances. The finding of the study was that technological innovations have a positive relationship with commercial bank performance.

Park et al. (2021) in their article entitled "the impact of technological capability on financial performance of semi-conductor industry" found out that generally technological capability affects the financial performance of the semi-conductor industry. Financial performance the dependent variable was measured by revenue/ sales and market capitalization. On the other hand the technological capability being the independent variable was measured by technology asset, technology intensity, technology efficiency and technology diversity. This research adopted regression and correlational research designs. The data for the research was collected from global semi-conductor alliance which deals with analyzing and provision of market trends, technological issues and financial data for global semi-conductor entities. A sample of 92 semi-conductor firms was selected from the period 2012 to 2016. Patents data from United States of America was used. This was from the period 2005 to 2014.

Al-qudah (2019) carried out a study on the effect of information technology on the financial performance of Jordanian industrial companies. He found out that there was a positive relationship

between the industrial companies' financial performance and information technology in the republic of Jordan. Information technology was measured by knowledge of information technology, performance measurement, knowledge of human resource and software programs. The research design that was used involved analytical and descriptive statistics. The target population was the industrial companies that are listed in the Amman stocks exchange. A total of 120 questionnaires were distributed to respondents who included the information technology managers, financial managers and chief executives officers of the companies out of which 100 of them were returned dully filled and were found acceptable for statistical analysis. This represented response rate of 83% which was adequate. Secondary data was also sourced from journals, internet and books. The data was analyzed to determine the positive relationship between information technology and financial performance of the industries in Jordan.

Gunawan and Serlyna (2018) carried out a research on the impact of information technology investment on the financial performance of banking sector. The study was on the banking sector in the republic of Indonesia. In the study the financial performance was measured by return on assets (ROA), Net profit margin, (NPM) return on equity, (ROE), and earnings per share, (EPS). On the other hand the investment on technology was measured by the cost of investment. A purposive sampling method was adopted to select the companies under the study. The data used was for the period 2012 to 2014 for the banking companies listed in the Indonesia stock exchange. The audited financial statements for these companies were the source of the data that was analyzed using simple regression method. The findings was that investment on information technology positively affected the return on assets, secondly information technology affected positively the earnings per share, thirdly information technology affected positively the return on equity and finally information technology affected negatively the net profit margin.

Alkhaldeh et al. (2023) jointly carried out a research on the effect of financial technology adoption on financial performance in Jordanian Small and medium enterprises, the role of financial satisfaction. The study adopted a partial least squares- structural equation modelling (PLS-SEM). The target population was 500 small and medium enterprises from Jordan. Questionnaires with 10 point Likert scale were administered online to respondents over 18 years of age and who had applied at least a single financial technology service in the previous one year. A total of 587 respondents were found to be valid for analysis but only 500 of them were considered for the study. After the analysis it was found out that both financial technology and financial satisfaction had a positive relationship with financial performance of the small and medium enterprises. And therefore the firms were encouraged to adopt financial technology in order to boost customers' financial satisfaction which will in turn enhance the SMEs financial performance.

Ratnawati and Susilowati (2022) carried out research on the implication of digital economy and financial technology towards financial performance of financial services sector in Indonesia. The data used was for the period 2015 to 2019 from financial services companies using purposive sampling technique. The data collected was analyzed by use of path analysis using Warp PLS 7.0 software. The findings were that there is positive relationship between digital economy, financial technology and financial performance of financial services companies.

Chuc et al. (2023) in their paper entitled "Impact of financial technology (FINTECH) on financial performance of Micro finance institutions in Bahrain" found out that finance technology and finance performance are highly positively related. Study adopted quantitative analysis approach. From sample of 19 banks operating in United Arab Emirates the targeted population was the professional bank employees who resided in United Arab Emirates. Findings of study show there

was high, positive relation between finance technology and finance performance of micro finance institutions. Finance result was evaluated by ROA alongside ROE.

Still in United Arab Emirates, Baker et al. (2023) did research on “impact of financial technology on improvement of banks’ financial performance”. This study involved banks listed in Abu Dhabi stock exchange and Amman exchange. Data collected was for the period of 9 years ranging from 2012 to 2020. The data collection was administered by use of questionnaires. 115 questionnaires were distributed to bank at the rate of 5 questionnaires each to the respondents in the republic of Jordan and United Arab Emirates. Out of 115 questionnaires 11 were incomplete and thus disqualified and consequently excluded during analysis. All the 13 registered banks in Jordan listed in Amman stock exchange were captured for the study and 10 registered banks in Abu Dhabi exchange were selected as sample study. Respondents were senior employees and managers from both Amman and Abu Dhabi securities exchanges. The findings were that finance technology has statistical on financial performance of banks’ financial performances. Financial performance was measured by use of net profits (surplus/deficits) and total deposits of the commercial banks

From South Africa, Tshukudu et al. (2022) did research on analyzing relationship between financial technology and commercial banks’ finance performance in South Africa. The research adopted simple regression analysis approach together with descriptive and correlational analysis. The study employed use of secondary data during the period 2011 to 2021 from the World Bank and IRESS expert 2022. The IRESS expert provided return on equity and return on assets from 5 largest banks in South Africa by size. After the analysis of data it was established that technology has positive relation with finance performance of the commercial banks in South Africa.

Ogbonna et al. (2023) in their research on financial technology and financial performance of financial institutions in sub Saharan African economies for the period 2005 to 2021 determined strong positive relation between financial technology and performance of financial institution in sub Saharan Africa countries. The study focused on three nations namely Kenya, Nigeria and South Africa. The study adopted panel data and times series analysis to analyze data. Findings were that financial technology have a high positive relation with financial institutions performance. Performance was evaluated by net income (surplus), ROE, return on assets (ROA). This study therefore affirms that finance technology has effect on financial performance of finance institutions from sampled economies in Africa.

Adesoye et al. (2024) did research on “the effect of financial technology on the financial performance of deposit money banks in south west of Nigeria”. Financial technology was measured by automated teller machine (ATM), mobile phone banking, internet banking, Point of sale from independent variable front. On the other hand financial performance as dependent variable was measured by net income, return on equity (ROE), Return on assets (ROA). Target population was the employees and customers of deposit banks located in south west of Nigeria. There were 1971 banks in total from the region but only 16 banks were selected from the 22 banks in state capitals that were considered to be representative of commercial centers. To obtain the sample a multi stage sampling procedure was used to arrive at 768 respondents shared equally between customers and senior employees of the banks. Data had been collected by using questionnaires. Findings were both mobile banking and internet banking influence financial performance of the banks but mobile banking drive financial performance more than internet banking. Automated teller machine drives financial performance the least.

Muchiri and Juma (2023) in their paper entitled “Financial technology practices and financial performance of micro finance institutions in Nairobi County” adopted cross-sectional research form of design for study. Financial technology was measured by biometric features, cyber security systems and authentication mechanisms while finance performance was measured by return on assets (ROA). There were 108 respondents purposively selected from 13 micro finance institutions selected through simple random sampling from Nairobi County. The respondents were the apex and middle level cadre of employees. Primary data collected by questionnaire while secondary data was collected by data sheet. Data was analyzed by use of SPSS software. The findings indicated that the measures of financial technology accounted for 61.3% of the financial performance and therefore financial technology has significant positive relation with financial performance of micro finance institutions in Nairobi County.

Muttai et al. (2023) on paper on “the effect of financial technology on the financial performance of commercial banks in Kenya” established that finance technology fairly explains finance performance and that financial technology is adequate in prediction of financial performance. Financial technology was measured by automated teller machines, agency banking, mobile banking and internet banking while finance performance was evaluated by return on assets (ROA). 38 banks that operated for 10 years from 2012 to 2021 were sampled and secondary data collected by using census approach. Data had been analyzed using descriptive analysis and inferential approach entailing multiple regression and correlation analysis. Though all the other measures of financial technology had positive relationship with financial performance, automated teller machines adoption had negative relationship with finance performance. Further internet banking, bank size were found to have minimal positive relation with finance performance of commercial banks, Kenya.

Yilmaz (2018) carried out research on “effect of information technology investments on financial performance of Turkish commercial banking (2010-2015)” where he found out that the literature review could not prove the relation between information technology (IT) investments and financial performance in the banking industry. This was after analyzing data for the period of 6 years from 2010 to 2015. The information technology investment was measured by information technology capital investment, information technology investment efficiency rate and information technology human resources investment while financial performance was evaluated by return on assets (ROA), return on equity (ROE) and Total income (revenue)/ total expenditure. The data was collected from TBB statistical reports.

Shen et al. (2022) on their research paper entitled “Research on the impact of technological finance on the financial stability based on the perspective of high- quality economic growth” found out that technological finance and economic growth had a positive relationship in china while technological finance and financial stability had an initial negative effect due to shock but eventually turns to positive after stabilization of the shock. The data was collected from 30 provinces of China and was for the period 2004 to 2017.

Still in China, Liu et al. (2023) did research on “effect of financial digital transformation on financial performance, intermediary effect of information symmetry and operating costs” and found out that financial digital transformation enhances the overall company financial performance. The research design used was descriptive and correlation analysis. The data was from 1566 China’s A companies for the period ranging from 2012 to 2021 and the sample size was 21932.

Siska (2022) carried out research on “Financial technology (FinTECH) and its impact on the financial performance of Islamic banking” found out that financial technology has impact on financial performance of Banking Syariah Indonesia. Financial technology was measured by internet banking, mobile banking phone banking and SMS banking. On other hand financial performance was measured by financing to deposit ratio, return on assets (ROA), operating expenses to operating income, return on equity (ROE) and capital adequacy ratio. The research used quantitative and descriptive research design. Banking Syaria Indonesia was the case study as it’s the largest Islamic bank. The secondary data used was for the period 2016 to 2020.

Chaarani and Abiad (2018) in their research paper entitled, “The impact of technological innovation on bank performance” found out that investment in automated teller machines (ATMs) and internet banking has significant positive relationship with banks in republic of Lebanon. They also found insignificant relationship between mobile banking, investment in computer software on financial performance in the Lebanese banks. The measures of technological innovation were mobile banking, investment in automated teller machines (ATMs), investment in computer software and internet banking. On the other hand finance performance was measured using two parameters namely return on assets (ROA) and return on equity (ROE). Research was based on population of 32 Lebanese banks as at 2018. Non probability sampling methods was used to select 17 banks from the 32 giving a representation of 53.125%. The research adopted the descriptive and multiple regression analysis. The secondary data from these banks was collected and analyzed and the extent of relationships was determined.

Almashhadani and Almashhadani (2023) carried out research “on impact of financial technology on banking performance, case of foreign banks in United Arab Emirates”. Bank result was

measured using return on equity and return on assets .Study was quantitative and adopted cross sectional analysis using descriptive and correlational analysis. Data used was secondary from 17 banks out of the 26 banks in United Arab Emirates. Findings show that financial technology has significant non negative relation with (ROE). Findings also show that financial technology had significant positive relation with return on assets (ROA). Overall these findings showed that financial technology has high positive relation with bank performance.

Enoruwa et al. (2023) found out “that technological innovation has positive and a negative long run relationship with bank performance in West Africa and the findings were same for Ivory Coast, Ghana and Nigeria”. These findings are recorded in their paper entitled “Impact of technological innovations on bank performance in selected west African countries (1997-2020)”. The research used regression analysis autoregressive distributed lag model (ARDL). Dynamic OLS and Modified OLS models were also used. Technological innovation was measured by mobile banking, internet banking, POS and automated teller machines (ATMs). On the other hand bank performance was based on (ROE) and (ROA). Secondary data for the study was sourced from world development indicator website for the period from 1997 to 2019.

Njenga and Nasieku (2017) did research on “effects of technological innovation on financial performance of commercial banks, Kenya”. Technological innovations were measured by automated teller machines (ATMs), electronic funds transfer, internet banking and mobile banking. Financial performance parameter measures were profit (surplus), return on assets (ROA) and total income (revenue).The study applied descriptive and quantitative research design. Secondary data was obtained for the period 2006 to 2015 from the 42 commercial banks which were authorized to operate by central bank, Kenya (CBK) by 31st December 2015. Data was

analyzed and the findings were that technological innovations have significant positive relationship with commercial banks' finance performance.

Okello et al. (2023) conducted a research on “mobile banking adoption, technological efficiency and financial performance of small and mediums enterprises in Kajiado County, Kenya”. Study adopted descriptive design mode of research. Targeted population were 58 registered SMEs in Kajiado County. Data used was obtained by five Likert scale questionnaire and analyzed by inferential and descriptive statistics and by use of multiple regression analysis. Results showed that mobile banking significantly predicted financial performance while technological efficiency partly mediated the relationship. From the studies discussed above on technology adoption no study has been done on the same against finance performance in public universities, Kenya and thus need to test in order to bridge the gap.

2.3.6 Moderating by internal audit practices on financial performance

In a relationship between independent and dependent variables there may be some other factors that come into play and affect this relationship. It is therefore important to test if there any other factors that have significant effect on degree which the dependent variable is swayed. In this study we have so far listed five independent variables namely financial awareness, human capital, procurement process, investment appraisal and technology. A moderating variable is either qualitative or quantitative and affects or directs relationship between independent and dependent variable (Baron &Kenny, 1986). Example of qualitative is size while quantitative is price. Moderators may or may not change the relationship between the variables in either way.

Mohammad and Navid-Reza (2016) states that moderating variables also contribute in answering the questions, why, how and when a relation exist between independent variable and a dependent

variable. Under moderation effect, this study seeks to examine how internal audit practices affect relation between independent variable and finance performance being dependent variable in public universities in Kenya. Parameters to measure moderating effect was the quality of internal audit that is undertaken within the universities. The other one was the independence of the audit function in each of the university in the study. The third parameter was the size of the audit function in the university in terms of the number of staff and sections. The fourth parameter to measure internal audit function was the independence of audit staff in performance of their audit functions and duties.

Internal audit is a basic function that management uses in internal control management of organization resources to avoid their wastage and misuse (Saddam et al., 2021). This function is normally carried out by specialists in the organizations with a view to increase productivity. In their research on “internal audit and financial performance in commercial banks in Yemen” they looked at the independence, the quality and size of the internal audit function. 90 questionnaires were shared among 23 banks in Yemen and the findings were analyzed and showed that audit practices internally relate positively with how banks perform financially.

Further, Awdat (2015) carried out a research carried out a research to see how internal processes of audit impact on how commercial banks in Jordan performs financially. Parameters for the audit were internal audit quality, management of audit, develop risk management control. These variables were found to positively relate to performance of banks under study.

In Nigeria, Ojong and Ekponta (2014) did research on “effect of internal audit on finance performance of tertiary colleges in Nigeria”. Parameters for audit function were regular audits, competency of audit staff, and independence of audit function, accountability and supervision of

audit staff. The findings were that the college under study had an effective internal audit function but had no significance on college financial results.

In Kenya, Muchiri and Jagongo (2017) in their research on the internal auditing and how Kenya meat commission performs financially it was found out that internal audit plays a big role on finance scores. Variables of the audit were corporate governance and audit committee. The primary data was collected from 55 managers in the institution and the data was both ordinal and nominal. Sishumba et al. (2022) in their research on “effect of internal audit on financial performance in banks” found out that if there is strong positive relation between internal audit, and financial performance. This was based on case study of standard chartered bank in Lusaka, Zambia. Sample size was 156 respondents out of which 127 of them returned filled questionnaires. The variables were measured by internal control and independence of internal audit.

Amaka and Ikechukwu (2022) in their paper on “impact of internal audit efficiency on financial performance” established that internal audit and finance performance have significant relationship with each other. The internal audit efficiency was measured by integrity, ethical values, competency of the workers, and the management philosophy within the organization and internal audit quality. This research was carried out on Nigerian manufacturing firms from various departments that included human resource department, finance department, audit department and procurement department. Financial performance indicators were profitability (surplus or deficit), growth in assets, liquidity (current ratio) among others.

John and Mutembei (2023) in studying the “effect of internal audit on financial performance of the listed commercial banks in the Nairobi Securities Exchange Nairobi county Kenya” found out the significant relation between internal audit (IA) and finance performance. IA was measured by assets safety, laws compliance and management of risk. But on the other hand financial

performance was measured by liquidity (current ratio), net revenue (total income) and assets return (ROA). The study was based on 10 commercial banks with 86 respondents drawn from various levels of members of staff including finance managers, credit managers, operation managers, internal auditors and risk managers. The study recommended strengthening of internal audit functions to enhance finance performance.

In their review of literature, Rapani and Malim (2020) concentrated on “relationship between internal control elements and financial performance of Iraqi banks”. This paper employs an inductive strategy, which involves a survey, analysis, comparison, and summarization of all publications published in reputable journals during the previous seven years. According to the research this paper examined, Iraq's internal control is weaker than that of developing nations. Additionally, it discovered a stronger positive correlation than a negative one between “internal control and financial performance”. Researchers came to conclusion that most studies on these two variables had shown strong and positive association between both after classifying the studies using a systematic review. Furthermore, the researchers discovered that no prior research has examined the aforementioned association within the framework of the banking industry in Iraq. Current study was done in Kenya, while the previous one was in Iraq.

“Internal audit and the financial performance of Yemeni commercial banks” were main topics of Hazaea et al. (2021) empirical research. This paper provided a brief overview of the IA system in Yemen and looked at five factors—size of the IA, frequency of meetings of internal audit committees, the implementation of governance principles, the independence of IAs, and impact of IA system on finance performance of Yemeni commercial banks. Specially designed questionnaire was applied to gather the study's primary data. Out of the fifty questionnaires that were sent, 42 were retrieved and found to be valid for analysis. The findings showed that while the size of

internal audit committees and their frequency of meetings often had a negligible positive impact on banks' performance, internal audit's adherence to standards, internal auditors' independence, and quality governance all had significant impact on banks' financial performance. Furthermore, the nation's findings demonstrate that automated internal auditing has an effect on enhancing financial performance in banks. The current study was conducted herein Kenya; and previous study was conducted in Yemeni.

In their study, "A Survey Study of Selected Iraqi Banks," Fatah et al. (2021) examined “impact of internal audit on financial performance in accordance with IIA Standards”. Since it is an appropriate tool and solution for data collection, the researchers created a survey questionnaire and gave it to the target professions. Conversely, inferential statistical techniques and descriptive analysis were employed for data analysis. Study came to a conclusion there is favorable correlation between internal auditing standards and commercial banks' financial performance. The interviewees indicated that Iraqi commercial banks are still not subject to the same levels of international internal auditing standards, and that there was disagreement among the research sample participants on the statements made regarding the use of internal auditing standards in the various activities. According to the regression model's findings, financial performance might rise for every unit increase in internal auditing standards. This study will be conducted in Kenya, whereas previous study was conducted in Iraq.

“Impact of the internal audit function on financial performance of Nigerian commercial banks” was the main topic by Ezejiofor and Okolocha (2020) study. Study's specific goals are to ascertain the degree to which internal audit procedures reduce fraud in order to support the finance performance of commercial banks in Nigeria, also extent which internal audit control significantly

improves such performance. In this work, survey research design was used. According to the analysis, internal audit procedures and control have a favorable impact on Nigerian commercial banks' financial performance, and impact is found to be statistically significant at the 5% significance level. This study was done in Kenya, whereas previous one was conducted in Nigeria.

Focused internal audit practice and financial reporting quality: A perspective from Nigerian listed foods and beverage firms (Oladejo et al., 2021). The financial reports of four food and beverage companies that were purposefully chosen from among twenty-three listed in Nigeria Exchange as of December 2020 provided secondary data covering the nine (9) year period from 2010 to 2019. The three criteria that measure the internal audit practice—internal audit fee, internal auditor technical proficiency, and firm size—make up the independent variable in this study. Quality of financial reporting is dependent variable. Statistical Regression analysis was utilized to assess internal audit quality impact on the financial reports quality of sampled firms at a 95% confidence level, while mean ranking analysis was utilized to assess the determinants of internal audit attributes in the chosen firms. The overall findings showed that internal audit practice was significantly correlated with all identified internal quality attributes (internal audit fee, technical training proficiency, and firm size), and that these attributes also positively impacted the financial reporting quality and performance of a sample of Nigerian food and beverage companies. This study was done in Kenya, whereas the previous one was conducted in Nigeria.

“Impact of internal audit on financial performance of Deposit Money Banks in Nigeria” was the main topic of Kayode and Oyeshola (2021) study. The findings indicated a connection between internal audit and the money deposit banks' profitability in Nigeria. Additionally, Nigerian money deposit institutions' financial performance is positively impacted by internal audit reporting

channels. Study found out that internal audit and finance performance of Nigerian money deposit banks were positively correlated. Similarly, Nigerian banks' financial performance is impacted by internal audit reporting routes. This study was done in Kenya, where the previous one was in Nigeria.

“Impact of internal audit quality on the financial performance of insurance businesses” was the main topic of Ahmeti et al. (2022) study, which included evidence from Kosovo. The financial performance was assessed using return on assets ratio. The insurance companies that operated in Kosovo between 2015 and 2021 provided the six-month statements from which the data for this dependent variable were taken. The efficiency of internal audit, professional competence of the internal auditor, independence of the internal auditor, and criteria for internal auditing were considered as independent variables when evaluating internal auditing. Regression analysis and quantitative analysis are employed as data analysis approaches. The study's conclusions are based on the data, which show that professional competence significantly improved insurance businesses' financial performance while internal audit efficiency had the opposite effect. The study also discovered “weak but negative relation between internal audit standards and internal auditor independence and financial performance for the other two independent variables”. In contrast to age of firm, which had major negative impact on finance performance of insuring companies operating in Kosovo, size of insurance company also had a strong favorable link. The current study was conducted at public universities, whereas the previous study was conducted in insurance businesses.

“The impact of internal control components on the financial performance of the Iraqi banking sector” was the main subject of Hanoon et al. (2021) study. The components that were chosen

were monitoring, information & communication, control activity risk assessment, control environment. The Agency theory served as the foundation for this study's theoretical framework. The primary study design was a quantitative method with Structural Equation Modelling (SEM). Through non-random purposive sampling, a group of respondents that included the CFO, CEO, accountants, internal auditors, and audit committee provided the data. 365 people actually completed the survey, and the data were analyzed using SEM to ascertain relation between finance performance and internal control(IC) components. Study's findings has it that, internal control components significantly affect finance performance. Monitoring of control activities was the positively significant association. This study was done in Kenya, whereas previous one was in Iraq.

“The impact of internal control systems on financial performance of distribution companies in Kenya” was the main emphasis of Odek and Okoth (2019) study. Analyzing how internal control systems affect small- and medium-sized distribution enterprises' financial performance was major goal. Using the census survey method, a correlational and case study design was used to target all 38 employees. The study's findings could be used to pinpoint weaknesses in Moonbluez Enterprises Limited's internal control systems as well as in the distribution sector as a whole, particularly among small and medium-sized businesses. The present study will concentrate on public universities, whereas the previous study was centered on distribution corporations.

Hamed (2023) concentrated on “how internal control mechanisms guarantee the sustainability of financial performance”. This study examined “impact of banks' financial performance sustainability (FPS) in the Amman Stock Market on compliance of internal control systems (ICS)”. The degree of “ICS compliance and its effect on different financial performance metrics, including

profitability, earnings, and returns on sustainability initiatives, are investigated using a questionnaire survey of sixteen listed banks”. The banks' financial sustainability is found to be positively and considerably impacted by their adherence to the International Community Standards (ICS). This study specifically demonstrates that the monitoring, information communication, and control functions of ICSs are important factors influencing bank performance. This study focused on public universities, whereas previous one concentrated on Amman Stock,market .Candy (2021) concentrated on “impact of internal auditing on the non-financial and financial performance of rural banks”. Both primary and secondary data are used in data collection. Data were gathered from 38 rural banks in the province of Riau Islands through the use of questionnaires related to internal audit function and non-financial performance. The directors of rural banks make up the research's respondents. Partial Least Square (PLS) is the analysis approach used to look at the outer and inner models. The outcome demonstrates that performance, both financial and non-financial, is positively impacted by internal audit function. The performance is improved by the rural bank, which has a well-established internal audit function. While the current study concentrated on public universities, the previous study concentrated on rural banks.

Julie (2019) concentrated on how internal control procedures affected the agro-processing companies in Kisumu County, Kenya, in terms of their financial performance. The research design used in the study is correlational, meaning that it assumes a relationship between variables. Employees of the 66 agro-processing companies that operate in Kisumu County made up the study's target group. Agency theory, stewardship theory, and positive accounting theory served as the foundation for this investigation. Structured questionnaires were administered to gather data from secondary and primary sources, including pertinent publications, county government reports, journals, and publications. The results of the regression model's analysis, which were represented

by the variables risk assessment, internal control environment, information and communication control activities, and monitoring, showed positive correlation between financial performance of agricultural processing companies and these factors.

Ambuso (2021) examined “the effects of internal control procedures on the financial standing of private hospitals in Kenya's west”. Descriptive design form of research was adopted. Study's findings demonstrated that the organization's financial performance improved in 2020 compared to 2019 thanks to internal book audits, authority for work activities, and task segregation. This improvement was positively correlated with financial perspectives of private hospitals in western Kenya region. Findings also showed that financial performance of private hospitals, Kenya's western area is significantly negatively correlated with both standard operating policy and transaction documentation. Thus, study came to conclusion that financial performances of private hospitals, western Kenya are negatively correlated with transaction documentation and standard operating policies. The investigations also revealed a clear connection between internal audits of financial records of private hospitals, western Kenya, authorization of labor activities, and separation of responsibilities.

Wekesa and Malenya (2020) concentrated on how audit processes affected Kenya Pipeline Company Limited's financial results. Agency theory and transaction cost theory served as the study's foundation. Survey design used in their study was descriptive. According to study results, Kenya Pipeline Company Limited's financial performance is highly influenced by all conceived study factors, including audit outsourcing, electronic auditing, audit reporting, and audit committee membership (dependent variable). The study came to the following conclusions: (1) audit outsourcing improves a company's financial performance by helping to achieve reliable accounting

information, which in turn produces independent, accurate, and reliable financial management information; (2) electronic auditing has positive impact on company's finance performance by guaranteeing real-time detection of financial scams, which helps to seal financial loopholes; and (3) a company's financial performance is positively impacted by the diversity of its audit committee, as diversity in terms of gender, age, and size checks the committee members' conspiracies to compromise audit reports and audit fraud disclosures. While this study concentrated on public universities, previous study concentrated on Kenya Pipeline Company Limited.

Koskei and Otinga (2021) study, "A Case of Kericho County Government, Kenya," examined "the impact of internal audit standards on the financial viability of county governments". The link between the variables was hypothesized and explained using an explanatory survey approach. Internal audit standards had a considerable impact on the dependent variable (financial sustainability in Kericho County Government), according to both inferential statistics and descriptive statistics. The study demonstrated positive correlation between internal audit standards and the county government of Kericho's finances performance, indicating that a rise in internal audit standards would result in an improvement in the county government's finance performance. The study came to a conclusion that closely watched internal audit standards can prevent intentional accounting errors, save county governments a significant amount of money, and allow them to continue funding their expenditures. While this study concentrates on public universities, the previous study concentrated on county governments.

"The effect of internal audit on the financial performance of commercial banks listed in Nairobi County, Kenya's Nairobi Securities Exchange" was the main topic of study (John & Mutembei,

2023). Since a survey was the most appropriate method for gathering data, the researcher gave one to every member of the target group. Regression analysis and quantitative analysis were employed as data analysis methods. The data analysis process made use of descriptive statistics including standard deviation, frequency distribution and mean. Tables were drawn to present the data for ease of comprehension and interpretation. Based on the data, the study draws the conclusion that internal audit standards, internal audit independence, professional competency, and internal control positively correlate with commercial banks' finance performance. Specifically, the study found that raising internal audit standards would boost commercial bank financial performance, as would raising internal audit independence. Similarly, raising professional competency would boost commercial bank financial performance, and raising internal control would boost commercial bank financial performance even more. The new study concentrated on public universities, whereas the previous study concentrated on commercial banks.

Eniola et al. (2021) examined “relationship between financial performance and internal control systems” using data from listed businesses in the South-West region of Nigeria. Stakeholder theory conformance and a thorough evaluation of the literature served as the main foundations for developing the research framework. To ascertain if internal audit control, control procedures, risk management control, the control environment, and monitoring techniques affected financial performance, the study employed multi-level random sampling and multiple regression models. The results pointed to the goals by showing a positive correlation between internal audit control, risk management, monitoring procedures, and operational performance. Asset returns are severely harmed by monitoring procedures and control settings. Corporate managers would find this research useful since it highlights aspects of internal control systems that are often disregarded and

offers tips for enhancing the system's functionality. The study was conducted in Nigeria, whereas Kenya will host the present investigation.

Ehaji (2019) examined how internal audit procedures affected Kenya's financial performance using the Vihiga County Government as a case study. Because data authenticity was attained with the collaboration of research experts who verified the research instruments, the study concentrated on Vihiga County. Correlation, regression, descriptive statistics, inferential statistics, etc. were used in analyzing the acquired data. The hypothesis (Ho), which states “there is no significant association between internal audit practices and financial performance”, is rejected in light of the ANOVA results, which demonstrated that internal audit practices have high impact on finances performance. While this study concentrated on public universities, the previous one concentrated on county government.

“The influence of modified internal audit practices on the financial performance of Kenyan banks listed on the NSE” was the main emphasis (Mokono, 2022). Study's actual goals were to: analyze impact of ISA adoption; assess the impact of internal audit independence; evaluate impact of audit committee operations; investigate impact of internal control system (ICS) on the finance performance of Kenya's NSE-listed bank; and look into moderating role of Central Bank of Kenya regulation on relation between internal audit practice and NSE-listed banks' financial performance. Descriptive and correlational research methodologies were used in the study. Study's conclusions demonstrated that, in contrast to the audit committee and the unmoderated ISAS, which had no statistically significant impact on finance performance, internal controls and independence have statistical impact on Kenya's Nairobi Exchange listed banks' financial performance. With comparatively high values for ROA and ROE, the R squared for the moderating effect of the CBK

restrictions also demonstrated a strong fit. Furthermore, it was clear that the CBK regulations' moderating influence had an impact on internal audit procedures, particularly ISAs. Boards of directors can better fulfill their governance duties with the support of internal audit, which boosts productivity and competitiveness. A well-run corporate governance system is essential to its success. This study focused on public universities, while the previous study concentrated on banks listed on the NSE.

The internal control procedures and financial results of Kenya's coastal county governments were the main topics of study (Ahmed & Nganga, 2019). Descriptive research design was used by the investigator. Both inferential and descriptive statistics were used to analyze the data obtained. Study discovered that risk assessment, monitoring, the control environment, information, and communication all had favorable and significant impact on financial performance. Study came to conclusion that the most important factor affecting the county governments' financial performance is risk identification and reduction. Because the Counties cannot manage the unknown, risk identification can thus be considered the fundamental first step in any risk management program. Making both short- and long-term decisions is made more definite and confident when the County's financial performance is being tracked. Faster growth and a healthier company are the results of this. The foundation for implementing internal control throughout entire organization is control environment. Adopting information and communication technologies effectively is essential to ensuring that county governments enhance their financial performance. It's observed that the current study concentrated on public universities, while the previous study concentrated on county government.

2.3.7 Financial performance

Financial performance is widely measured by profitability or surplus and by accounting ratios calculated based on financial statements of the particular firm or organization. The prime aim of a private firm is to make profits and increase wealth through growth in assets. However, for a public institution the main aim is to meet the societal needs and expansion to cope with ever increasing demand for services to the public. Though not anticipated, the public entities sometimes end up in surplus or deficits in an accounting period. One or several factors may cause financial performance of a firm to shift either negatively or positively. Kyere and Ausloos (2020) in their article “corporate governance and firm’s financial performance in United Kingdom”, established there is usually positive or negative relation between governance and financial performance, and sometimes no effect is found. They also assert that if the right corporate governance is adopted then financial performance improves. In their research they measured financial performance by use of return on assets and Tobin Q. The empirical review was conducted on data collected from 252 companies listed in the London exchange. Data was for the year 2014.

Kamatra and Kartikaningdyah (2015) looked at the “effect of corporate social responsibility (CSR) and financial performance” and presented the paper in a conference in Malaysia. The “financial performance was in their paper measured by ratios namely return on equity , earnings per share (EPS), return on assets (ROA), and Net profit margin (NPM)”. The population targeted was the mining and chemical companies in Idhonesia and were listed in the Idhonesia stock exchange during four years from 2009 to 2012. Sample of 24 companies was picked through purposive technique and secondary data acquired and analyzed for the findings.

In another paper by Cho et al. (2019) on “corporate social responsibility and corporate financial performance” a test on their relationship was done on 191 samples from companies listed in Korea

stock exchange. Again financial performance was determined by Tobin Q and return on assets. Findings showed that growth in assets was affected by corporate social responsibility.

Wambua (2018) measured financial performance by rate of return (ROA), internal rate of return (IRR), payback period and Net present value (NPV). In their paper they were looking at effect of project appraisal techniques on finance performance of SMEs in Nairobi, Kenya.

Pintea et al. (2014) measured financial performance by total income, total expenditure from statement of financial performance. On the financial position, total assets, Return on equity and ROA were used. Kyere and Ausloos (2019) measured financial performance by use of Tobin's Q (Q ratio) and return on assets (ROA). The Q ratio is given by market value of the firm/ total assets. ROA equals Net income/ total assets times 100.

According to Galant and Cadez (2017), financial performance is measured by profitability ratios that are calculated using data from the available financial statements of the firm. Kamatra and Kartikaningdyah (2015) measured financial performance by various ratios namely Return on Earnings, Earnings per share and Net profit margin. The performance of a university is largely measured by its ability to meet its core mandate which is research and training. This can only be achieved if human capital and infrastructure required is in place. The infrastructure will include lecture halls, workshops and laboratories. These can be measured by assets growth and ROA. The ability to meet day to day operations can be measured by current assets ratio, deficit or surplus in financial performance and ROA. Kenyan public universities have in the last few years performed below expectations registering deficits and increased amounts in pending bills. This has resulted to some universities closure of campus in endeavor to reduce the financial burden on the already strained universities financial resources.

Mungai et al. (2021) conducted research on “the effect of internal control on the financial performance of public universities in Kenya”. Targeted population was from 37 public universities with 285 respondents from sampled 34 public universities from stratified, random sample of the universities. The respondents were deputy vice-chancellors (finance) (DVC F), registrar (finance) (Reg F), information technology directors, financé officers and internal auditors. With response rate of 50% defined as adequate by Mugenda and Mugenda (2013) data was analyzed and positive relation between internal control and financial performance was determined. They asserted that financial performance could be measured through current ratio (liquidity) diversified revenue streams (total income) and operational results (surplus or deficits) among others.

Kim et al (2021) on their paper on determinants of financial performance in manufacturing units in Vietnam they found out that growth in income (sales) and growth in assets which result in a higher return on assets (ROA) significantly affect the financial performance of the manufacturing units

Enad and Gerinda (2022) in their paper on enhancing financial performance in banks in Sudan found out that customer response affect financial performance in the these banks. With response rate of 77% data was analyzed. The financial performance was measured included profitability (surplus and deficit) and sales (income).The findings were that customer response have a positive relationship with financial performance.

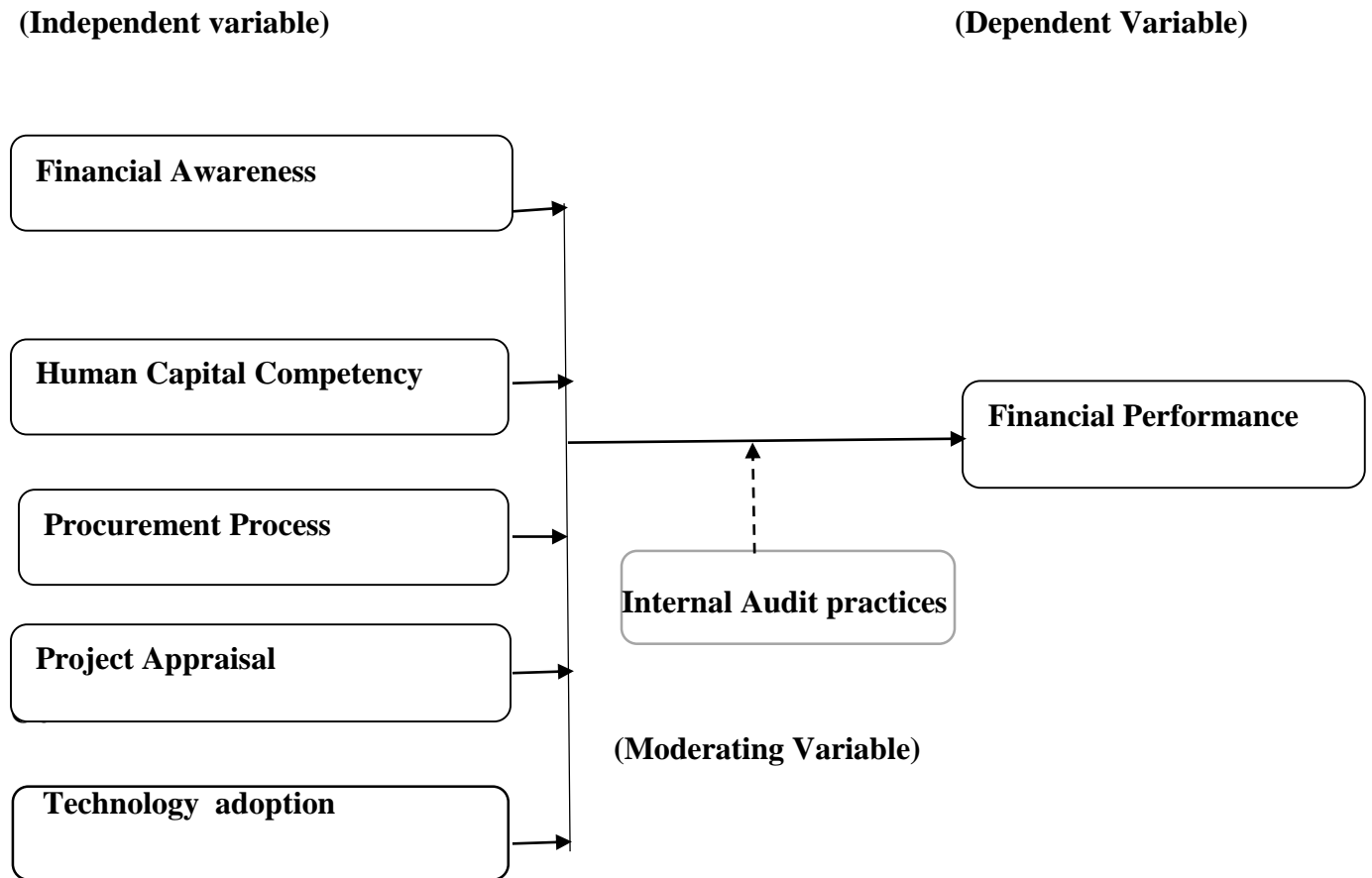
2.4 Conceptual framework

This is general view of study that was undertaken and shows the relationship that exist between independent and dependent variables and any intervening, mediating or moderating variable on their relationship. Conceptual framework starts by assuming a hypothesis of existence of a problem and then a procedure and process together with theories application a problem is resolved (Zackoff

et al., 2019). The concept is roadmap showing the interrelationship between variables to solve a problem in the real world. It guides the researcher when conducting the study. The variables are underpinned to theories that exist and shows how they relate to each other. In this study there are a number of variables namely financial awareness, human capital, procurement process, investment appraisal, technology as independent, regulations as moderating and financial performance as dependent variable. These variables were supported by the aforementioned theories which are resource based theory, Agent theory, institutional theory, prospect theory and motivation theory. The framework is as follows:

Figure 2.1

Conceptual framework

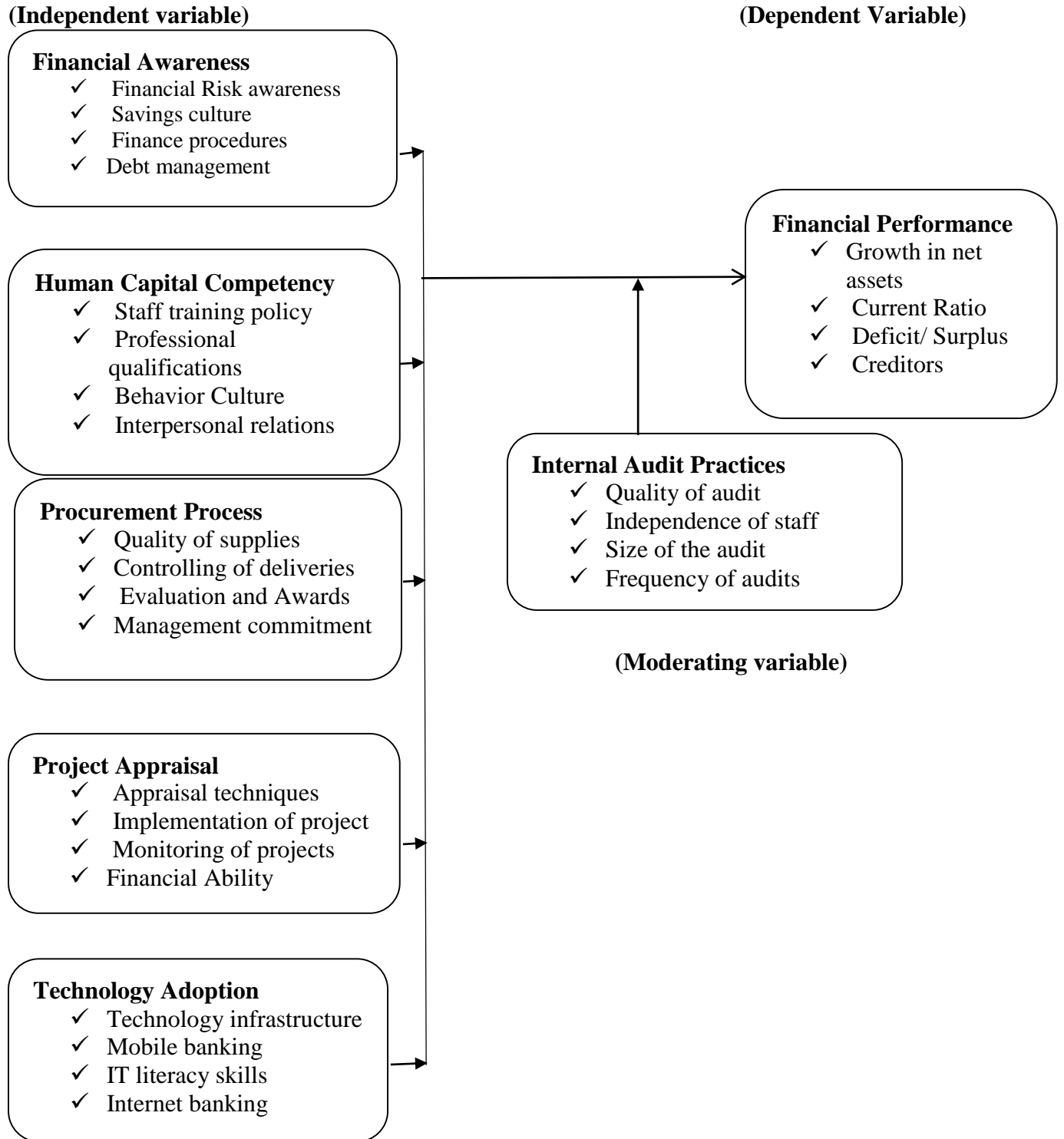


2.5 Operational Framework

Operational framework in research goes beyond conceptual framework and gives details on the parameters that were used to measure the variables. According to Zacharewicz (2018), the variables in the conceptual framework are broken into various indicators of measure for the purpose of collection of data and analysis thereon. In this study, all the variables were measured using various constructs under each of them as indicated on the operational framework. Under financial awareness financial risk, savings, finance procedures manual and debt management are the parameters to be used. Human capital was measured by staff development (training), the capacity of staff in terms of skills, organizational culture and interpersonal relationship. Under procurement process variable the measures are quality of goods, controlling, evaluations and tender awards and senior management commitment. Investment appraisal was determined by application of appraisal methods, implementation of the projects, the monitoring and the ability to complete the projects and in time. Technology was measured by infrastructure mobile banking, internet banking, and skills in information technology. On the financial performance front measured is done by evaluating growth in assets, deficit/ surplus incurred, creditors and current ratio. The parameters of each of the variables are indicated in the following operational framework diagram.

Figure 2.2

Operational framework



2.6 Research Gaps

The empirical review showed different studies carried out on the variables of this study namely financial awareness, human capital competency, procurement process, project appraisal, technology adoption on financial performance in different entities but there was none for public universities in Kenya. And in table below summary is provided showing the research gaps identified and that need to be researched on to add new knowledge.

Table 2.1

Research Gaps

Authors	Research Topic	Findings	Research gap
Hamida et al. (2020)	Effect of financial awareness on financial performance in (MSMEs) in Idhonesia	There was relationship between the two variables	Relationship between financial awareness and financial performance in Micro and small medium enterprises has been tested. This study tested the relationship between two variables in public universities, Kenya
Rusmingsih, et al. (2021)	Effect of human capital on financial performance in hotel industry in Malaysia	The results were that there was a relationship between the two variables in the hotel industry	Relation between human capital and finance performance in hotel industry was evaluated. The study sought to determine relationship between the variables in public universities, Kenya
Awuah et al. (2022)	Effect of procurement process on the results of procurement in	The findings were that procurement process has significant effect	It was found out that procurement process has significant

	tertiary colleges in Ghana	on the financial performance in the colleges	relationship with financial performance in colleges in Ghana. This study evaluated the relation between procurement process and financial outcomes in public universities, Kenya
Marcin and Dariusz (2020)	Investment appraisal practices in European union countries	The results indicated that even the largest corporations do not apply project evaluation techniques in determination of the projects to undertake	The findings were European union countries do not engage scientific methods to select the projects to undertake. This study determined relation between project appraisal and the finance results in public universities, Kenya
Hannon et al. (2021)	Financial technology and the performance of Bahrain banks	Technology had a significant effect on the performance of Bahrain Banks	Financial technology had a significant effect on performance of Bahrain banks. This study evaluated the effect of technology adopted finance results in public universities , Kenya

2.7 Summary of Literature Review

The literature review that exists as discussed above have looked at relationships of various variables on the financial performance of different entities. But the review has not captured the relationship of such variables in universities. This research therefore sought to find their relationships for the next course of action.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, explanation is provided on methods that this research adopted to ensure that data collected and analyzed reflects the actual position on the ground. The findings must be representative of real situation of the variables under study. Towards this end the chapter discusses the target population, the sampling, collection of data, pilot survey, validity and reliability of data collected, diagnostics tests, how the data was analyzed, presented and last but not the least the research ethical issues.

3.2 Research Philosophy

The philosophy entails origin, form and additional of new knowledge. According to Mauthner (2020), the philosophy focuses on the scientific method employed in collecting data for a particular phenomenon. Research philosophy deals with specifics in developing new knowledge and innovations. Research philosophy is a set of assumptions and beliefs about a phenomenon of new knowledge.

There are different assumptions in research philosophies namely ontological, epistemological and axiological. Mauthner (2020) defines ontological research as the assumptions of the inherent features of reality. These assumptions influence the way we view and investigate the objectives of our study. Epistemological are the assumptions about information. The information should be reliable, acceptable and communicable to all. On the other hand axiology deals with the value and integrity of the entire research process.

Given the nature of this study and assumptions as hypothesized, Realism philosophy was adopted to help in understanding the assumptions. In this philosophy the methods used in the research were

specific to the subject matter and were quantitative and qualitative. The idea is to have more reliable results of the study. Žukauskas et al. (2018) defines realist research philosophy as the combination of both interpretivist and positivist research philosophies, qualitative and quantitative respectively.

3.3 Research Design

Jilcha (2020) defines research design to be framework that would best guide a research study to yield best results. The decision on the research design process to be adopted is quite fundamental as it determines the type of information that was gathered and consequently impact on the quality of findings and conclusions of the particular study.

This research was carried out on correlational approach whereby multiple regression analysis was done together with Pearson's correlation were done. In descriptive statistics front, central measures of tendency were used. The multiple regression analysis assisted in determination of relationships between dependent and independent variables.

3.4 Targeted population

Target population was public universities, Kenya. These was classified into three categories based on age, CUE (2023) which has a subjective relationship with the size of the universities in terms of student population and the financial worth of the universities. The first category was the so called seven old universities and largest universities which was represented by University of Nairobi (UON), Kenyatta University (KU) and JKUAT. The second category was the ones established in 2012/2013 numbering fifteen and was presented by Multimedia University, Technical University of Kenya, Dedan Kimathi University, Chuka University and Karatina University among the others. The third and final category are public universities established in 2016 and was represented by Co-operative University, Kirinyaga University, Embu University and

Machakos University among the others. The Universities established in the year 2016 and before were the targeted population. This was informed by the need to have Universities financial statements audited by the auditor general who is the authorized certifying officer of financial statements of all government entities including Public Universities.

Considering that the Public Universities have a common major source of financing from Kenya Government and on same terms and are subject to same regulatory framework the selected Universities represented true and fair reflection of the reality on the ground. Therefore, the Universities selected were randomly selected in each category as they share same characteristics in terms of age and size, population wise and financially.

3.5 Sampling Frame

A sample represents the entire population for the study that is being carried out. There many sampling techniques that are applied in their determination and this may include stratified sampling, simple random, probability random sampling, cluster sampling, random sampling, and systematic sampling. Purposive sampling is also a techniques which is mostly used where a sample rich in information is selected.

According to Palinkas et al. (2015) and Creswell and Plano (2011), purposive sampling is the identification and selection of people or groups with experience and first-hand knowledge in an area of interest. This study adopted purposive technique of sampling to determine respondents to data collection instruments. The technique was adopted to ensure data collected is from respondents with hands on information to minimize bias and misrepresentation. From the selected universities senior officers of human resource, finance and procurement departments were the focus. Specifically, for each of the selected university Vice chancellor (VC) Deputy vice chancellors (DVCs), Registrars (F&D), Finance officers, Deans, Heads of procurement, Human

resource managers and internal auditors were the respondents. This ensured the data collected was devoid of material misrepresentation before the ultimate subjection to validity and reliability tests. This endeavored to have quality data collected.

3.6 Sample size

Purposive sampling was used to ensure that the data collected is rich in quality. Thirty (30) universities were targeted for the study. These are classified using strata method according to the year of establishment. The first category was the universities that were established between 1984 and 2007 and are seven (7) in number. The other category was the universities established in 2012 and 2013 and are (15) in number. The third category was universities established in 2016 and are eight (8) in number. Using Yamane (1967) formula with a standard error of 5% we get a sample of 155.

$$n = \frac{N}{1 + N(e)^2}$$

Table 3.1

Sample size

Year of Universities Establishment	No.of universities	Population of management staff	Sample size
1984-2007	7	42	38
2012-2013	15	90	74
2016	8	48	43
Total	30	180	155

3.7 Data Collection Instruments

Collection of data instruments enable the researcher to collect data for the intended study. Canals (2017) asserts that methods of data collection that are employed largely depends on the research

questions and objectives of the study. The data collection was administered by use of a questionnaire given to respondents. To ensure quality information there were three sets of questionnaire one for human resource department, second for finance department and third for the procurement department. Secondary data was also collected by use of a schedule administered to each University. A pilot study was conducted on two universities.

3.8 Data Pilot Survey

Pilot survey was conducted by use of small sample of selected sample frame to determine suitability of data collection instrument (Kombo & Tromp, 2018). This study endeavored to ensure quality data was collected for reliable results (Malmqvist et al. 2019). In this regard, the pilot survey was conducted at Kirinyaga University and Mama Ngina University College. The two universities were included in the list of universities under the study. The questionnaires were administered to the earmarked respondents and they were tested to find out if the collected data met the intended requirements to address the specific research objectives.

3.9 Data collected procedure

The data was obtained through administration of questionnaires. The questionnaires were issued to respondents by researcher in person and the convenient timelines were agreed on to ensure the desired response levels. It took a maximum of 2 weeks to fill the questionnaire as per the agreement. The questionnaire had an introductory letter assuring the respondents of utmost confidentiality of the data collected and that it is only intended for academic purposes. The questionnaires were administered both in soft and hard copies for convenience of both the researcher and the respondents. The authority to collect data was sought from National Commission of Science, Technology and Innovation (NACOSTI) through the KEMU University administration.

3.10 Validity and reliability tests

The validity and reliability tests were carried out to confirm the quality of data that has been collected. The desired quality of data ensured that the analyzed data produced the true reflection of the reality on the ground and consequently provides useful conclusions and recommendations.

3.11 Data Analysis Methods

Hamed (2022) defines data analysis as the process through which the data which has been collected is transformed into usable information. Some of the data collected may not have a meaning due to the qualitative nature and would need to be coded to have a meaning. The data was therefore worked on to ensure that conclusions made were devoid of ambiguity and lack of meaning. An SPSS software was used to convert data and compute the statistical inferences as was required. The multiple regression model was applied to test relationships between each of dependent and independent variable. Measures of central tendency were also undertaken.

3.11.1 Research Model

The following regression model was estimated.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

Where:

Y = Financial performance

X₁ = Financial awareness

X₂ = Human capital competency

X₃ = Procurement process

X₄ = Project appraisal

X₅= Technology adoption

$\beta_i; i=1,2,3,4,5$ = The coefficients for the various independent variables

ε =Error term

3.11.2 Moderation models

Model 1: $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \varepsilon$

Model 2: $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6M + \varepsilon$

Model 3: $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6M + \beta_iX_1 M_j + \varepsilon$

Where:

M= Internal audit practices (Moderator)

X_iM_j= Interaction term (independent variable*moderator)

3.12 Ethical considerations

The research was carried out professionally and within accepted plagiarism levels. On this front the data collection approval was sought from NACOSTI and confidentiality was observed to protect data collected from misuse and abuse by ill-intentioned individuals or companies.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents study findings and discussion. The aim of study was to find out relation between financial sensitization and finance results of state owned universities, Kenya and moderating effect of internal audit practices. The chapter is organized as per the study of objectives/variables. Chapter four begins by presenting results on reliability, response rate and background information. Thereafter, results based on study variables/objectives are presented including descriptive statistics, thematic analysis and correlation analysis. Further, the chapter details result on multivariate regression as well as moderation results.

4.2 Response Rate

The study respondents included universities' senior officers of human resource, finance and procurement departments. Specifically, for each of the selected university Vice- chancellor, Deputy vice- chancellor, Registrar, Finance officers, Deans, Heads of procurement, Human resource managers and internal auditors were the respondents. This ensured the data collected was devoid of material misrepresentation. Table 4.1 shows response rate.

Table 4.1

Response Rate

Response	Frequency	Percentage
Returned	113	72.9%
Unreturned	42	27.1%
Total	155	100%

The researcher administered 155 questionnaires to the respondents. Out of this, 113 questionnaires were completed representing 72.9% response rate. Saunders et al. (2009) observed that response rate above 50% is adequate for statistical analysis. Similarly, according to Mugenda and Mugenda (2003), 70% and above rate is considered very good. The response rate obtained of 72.9% from this study was considered to be a good representation of views of total population.

4.3 Pilot Study Result

Pilot study was to determine validity and reliability of data collection instrument. The validity and reliability tests were carried out to confirm the quality of data that has been collected. The desired quality of data ensured that the analyzed data produced the true reflection of the reality on the ground and consequently provides useful conclusions and recommendations.

4.3.1 Results on Reliability

To test reliability of research instrument Cronbach Alpha test was conducted using SPSS software.

Results are shown Table 4.2.

Table 4.2

Reliability result

Constructs	No. of Items	Cronbach's Alpha
Financial awareness	4	0.767
Human capital competency	4	0.805
Procurement process	4	0.890
Project appraisal	4	0.766
Technology adoption	4	0.706
Internal audit practices	4	0.790
Financial performance	4	0.841

Table 4.2 shows that Cronbach's alpha value for each of variables was higher than 0.7. In particular, financial awareness had 0.767, human capital competency had 0.805, procurement process had 0.890, project appraisal had 0.766, technology adoption had 0.706, internal audit practices had 0.790 and financial performance had 0.841. According to Taber (2018), Cronbach values above 0.7 are indicates instrument dependability.

4.3.2 Validity Testing

Validity entails evaluating the accuracy of the findings, starting from the researcher to the participants and finally to the readers. Content validity was enhanced in this study by seeking advice from experts in the field of finance. Some of these experts included; supervisor and other professionals. The experts went through the questionnaire to ascertain its adequacy in terms of content. The researcher then adopted the comments from the experts to improve content validity of the instruments.

Also, construct validity was checked using factor analysis, which summarized data that is more manageable without sacrificing any valuable details and thus promote the testing of hypotheses (Vaez & Abed, 2020). Factor loading value greater than 0.4 should be allowed and values below 0.4 would result in further data collection to help the researcher decide the values to be used. The validity test for the study was done using Principal Component Analysis where communality values are computed as shown in Table 4.3.

Table 4.3*Validity Test*

Variables	Initial	Extraction
Financial performance	1	.641
Financial awareness	1	.729
Human capital competency	1	.441
Procurement process	1	.832
Project appraisal	1	.829
Technology adoption	1	.725
Internal audit practices	1	.737

Extraction Method: Principal Component Analysis.
Findings as above indicated that variables values were above 0.4 implying that the questionnaire was valid. Further, validity was confirmed by research supervisors who went through the questionnaire and suggested areas for improvement.

4.4 Demographic Information

Results on demographic information in relation to respondents is summarized in Table 4.4. The aspects include gender, highest level of education, period of serving in university, period of service in current position and age.

Table 4.4*Demographic information*

Aspect	Level	Frequency (f)	Percent (%)
Gender	Male	61	54
	Female	52	46
	Total	113	100
Highest education level	Diploma	6	5.3
	Bachelor Degree	52	46
	Master	46	40.7
	PhD	9	8
	Total	113	100
Period of service in university	Less than 1 year	6	5.3
	1 – 5 years	10	8.8
	6 – 10 years	23	20.4
	Over 10 years	74	65.5
	Total	113	100
Period of service in current position	Less than 1 year	9	8
	1 – 5 years	39	34.5
	6 – 10 years	29	25.7
	Over 10 years	36	31.9
	Total	113	100
Age	20 - 30 years	10	8.8
	31 - 40 years	32	28.3
	41 - 50 years	38	33.6
	Over 50 years	33	29.2
	Total	113	100

4.4.1 Gender distribution

The finding indicates that male respondents (54/%) were more compared to female (46%). However, the difference was considered small and therefore, views of both male and female participants in regard to relations between financial sensitization and finance performance of

public universities were factored in this study. According to Bahovec et al. (2017), gender has an effect on financial performance where men and women are financially exposed.

4.4.2 Highest education level

The results indicated that (46%) of the respondents had bachelor degrees, (40.7%) had masters, 8% PhD and 5.3% diploma. The high level of education for most respondents was expected given that they work in universities. It also implies that the respondents were able to provide informed feedback on relations between financial sensitization and finance performance of public universities were factored in this study. Tuffour et al. (2022) observed that education on financial matters equips the trainee with both financial awareness and financial literacy.

4.4.3 Period of service in university

The finding reveals that 65.5% of respondents had been working in the university for over 10 years, 20.4% had worked for 6-10 years, 8.8% for 1-5 years, and only 5.3% has worked for less than one year. The results infer most respondents had sufficient working experience and therefore had good understanding of the relation between financial sensitization and finance performance of Public Universities were factored in study.

4.4.4 Period of service in current position

Results further showed that 34.5% of respondents had worked in current position for 1-5 years, 31.9% for over 10 years, 25.7% for 6-10 years, and 8% for less than 1 year. This implies that most of the respondents had adequate working experience in their current positions and hence conversant with how financial sensitization relates with financial performance of public universities were factored in this study.

4.4.5 Age of respondents

Lastly, 33.36% of respondents were aged 41-50 years, 29.2% were over 50 years, 28.3% were 31-40 years while 8.8% were 20-30 years. The results infer that majority of employees were middle aged and therefore expected to understand how financial sensitization relates with financial performance of public universities were factored in this study.

4.5 Diagnostic Tests

The main diagnostic tests were conducted including normality, linearity, multicollinearity, autocorrelation and heteroscedasticity. This ensured that the data was free from bias, which would result in inaccurate outcome.

4.5.1 Normality

Kolmogorov-Smirnov test was used to check for normality of the data. This test is considered more appropriate with sample size >50. In this study, sample size for teachers was 155, therefore, the test was appropriate. Table 4.5 shows normality result.

Table 4.5

Kolmogorov-Smirnov test Results

	Statistic	df	Sig.
Financial awareness	.119	113	.382
Human capital competency	.247	113	.121
Procurement process	.179	113	.117
Project appraisal	.135	113	.264
Technology adoption	.131	113	.141
Internal audit practices	.170	113	.112
Financial performance	.111	113	.209

a Lilliefors Significance Correction

Table 4.5 shows that all variables had P- Values or significant (sig) values greater than .05. This informs acceptance of null hypothesis of normal distribution. If significance value is >0.05 , the data does not significantly deviate from a normal distribution (Ghasemi & Zahediasl, 2012).

4.5.2 Linearity

Linearity test was done using scatterplots. It measures degree of linear association between correlated variables and is represented by a straight line (Jain et al., 2017). Figure 4.1 illustrates the linearity between financial awareness and financial performance.

Figure 4.1

Linearity Test; financial awareness and financial performance

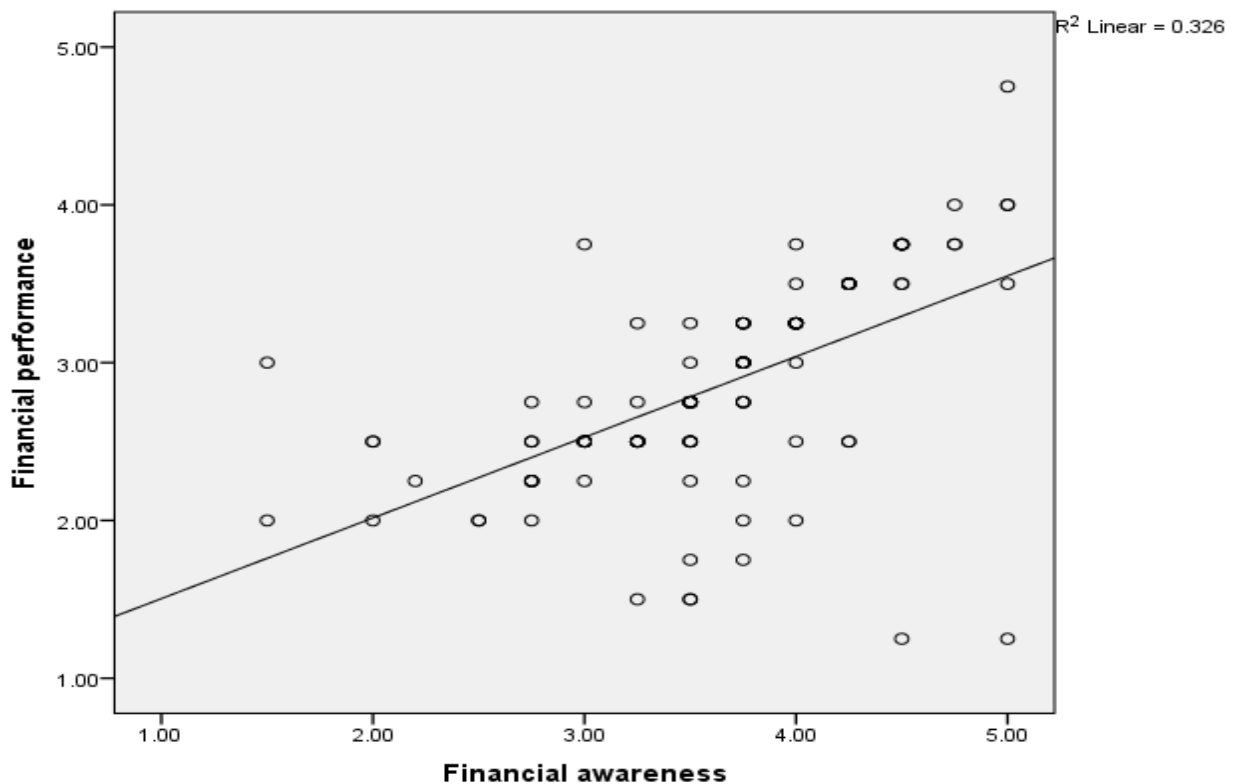


Figure 4.1 reveals existence of linear dependence between financial awareness and financial performance. This is depicted by positive slope line of fit.

Figure 4.2

Linearity Test; human capital competency and financial performance

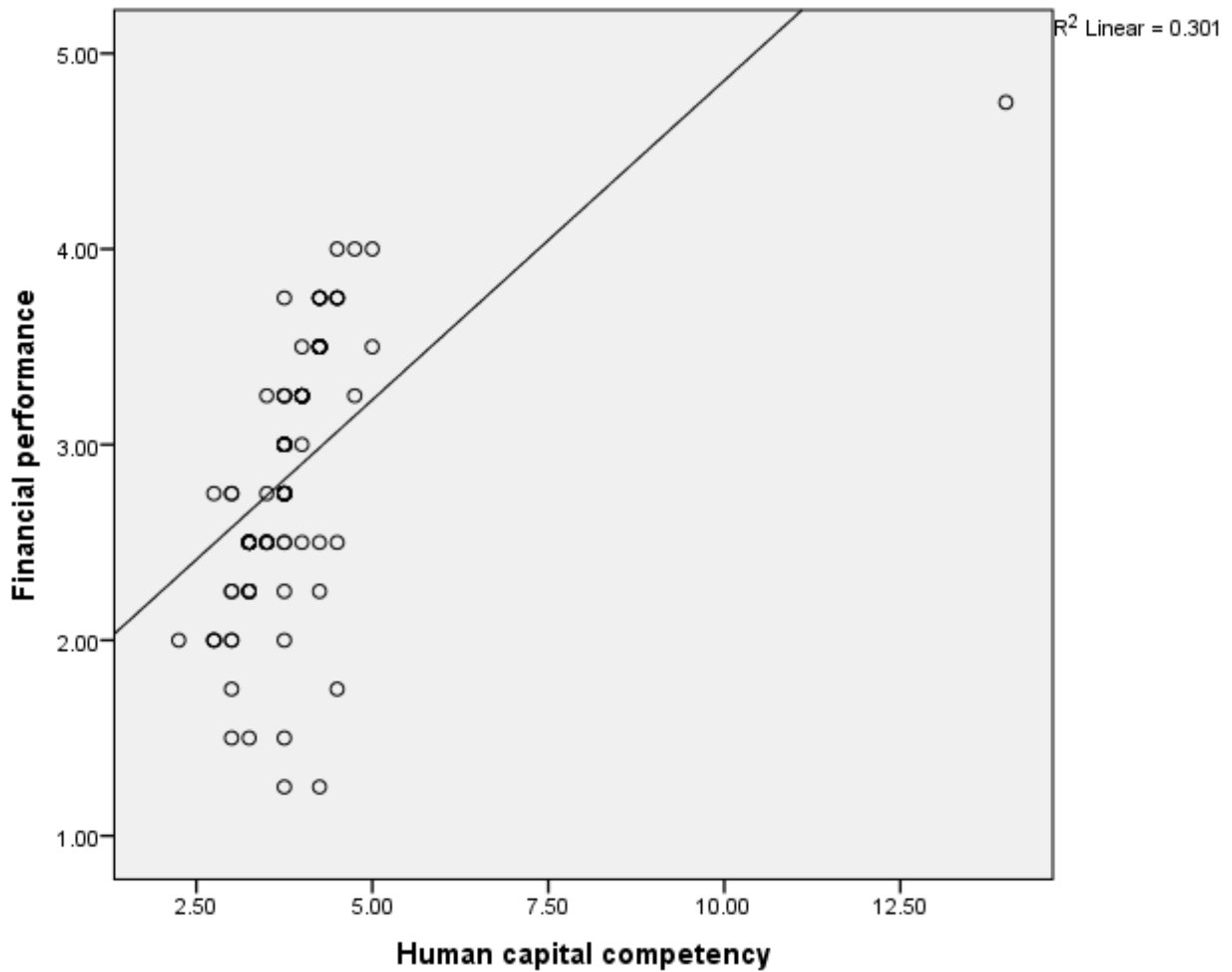


Figure 4.2 reveal existence of linear dependence between human capital competency and financial performance. And is shown by positive slope line of fit.

Figure 4.3

Linearity Test; procurement process and financial performance

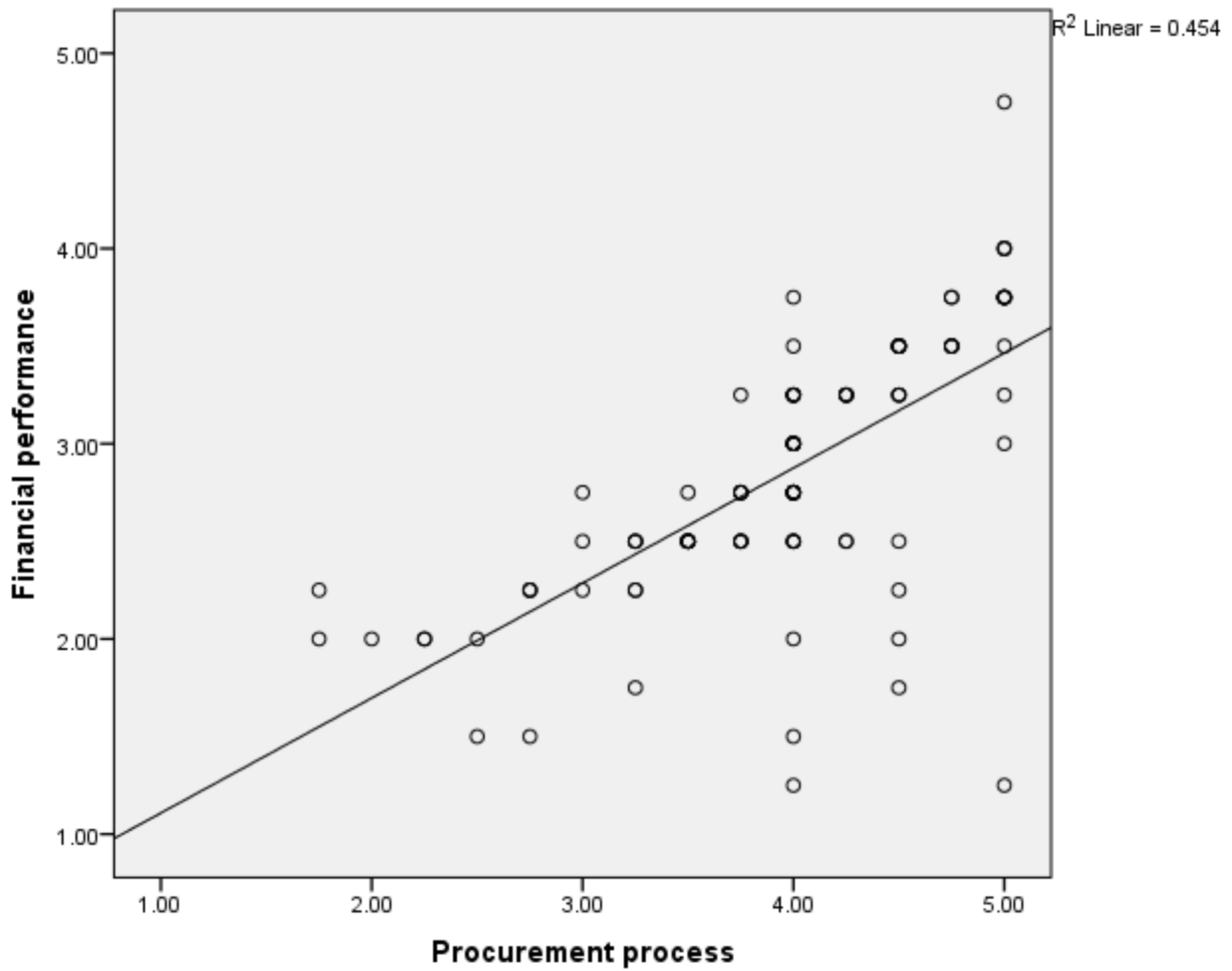


Figure 4.3 reveal existence of linear dependence between procurement process and financial performance. This is indicated by positive slope line of fit.

Figure 4.4

Linearity Test; project appraisal and financial performance

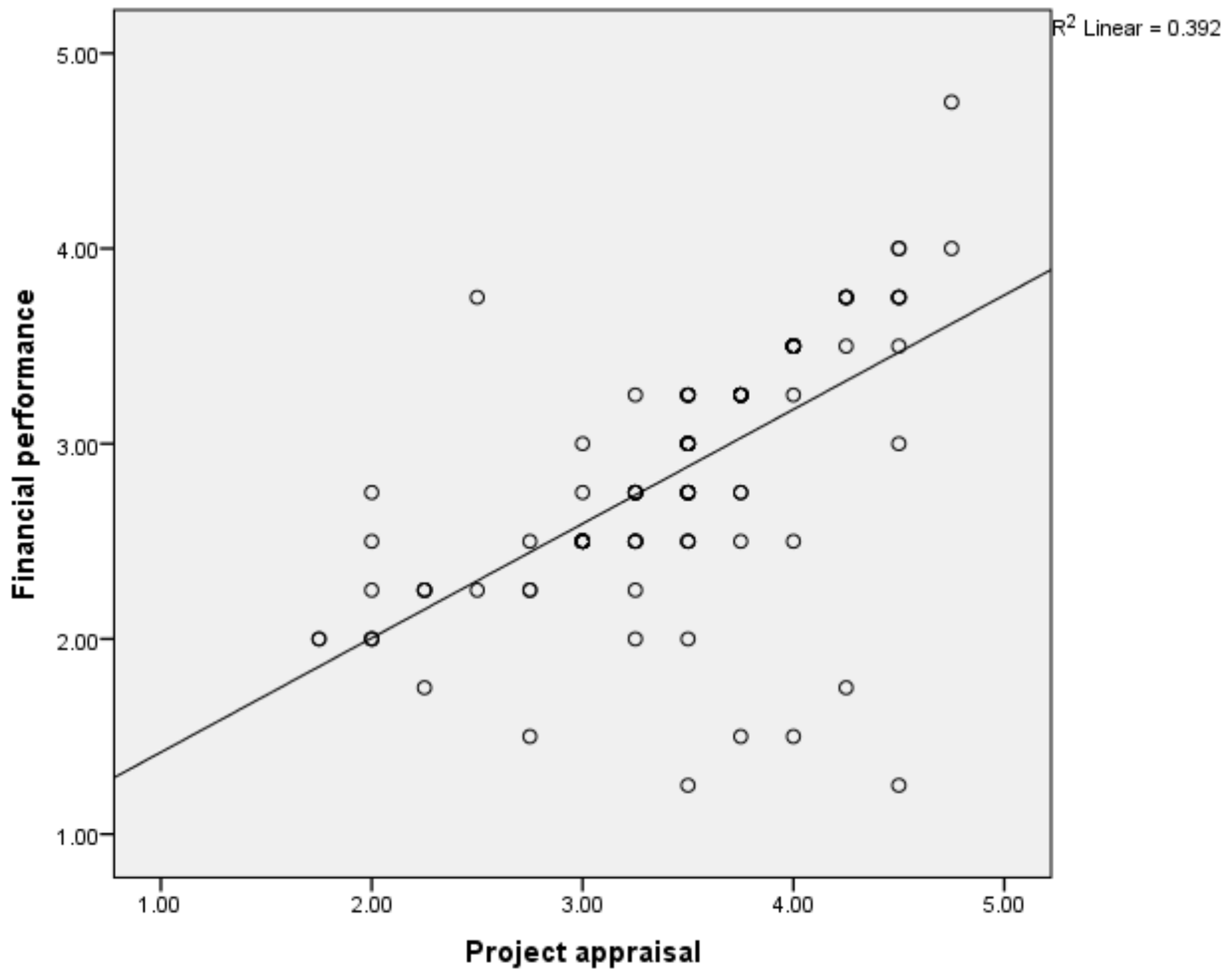


Figure 4.4 reveal existence of linear dependence between project appraisal and financial performance. This is depicted by positive slope line of fit.

Figure 4.5

Linearity Test; technology adoption and financial performance

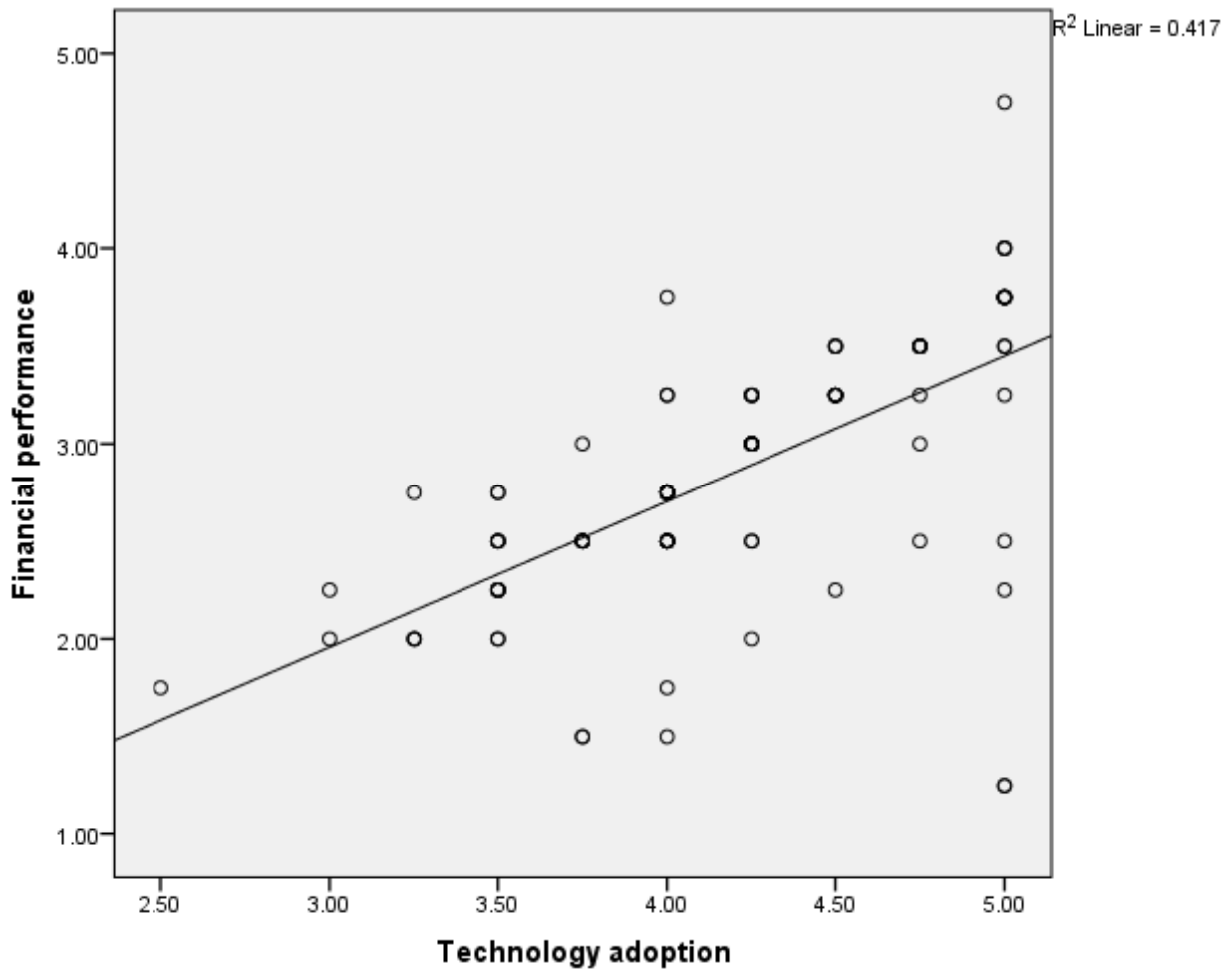


Figure 4.5 reveal existence of linear dependence between technology adoption and financial performance. This is indicated by positive slope line of fit.

4.5.3 Multicollinearity

Multicollinearity occurs when there is significant intercorrelation between two or more independent variables in multiple regression model. In testing multicollinearity, the VIF and tolerance values were used. Results are reported below.

Table 4.6

Multicollinearity test: Variance Inflation Factor

Variables	Tolerance	VIF
Financial awareness	0.31	3.21
Human capital competency	0.70	1.43
Procurement process	0.19	5.31
Project appraisal	0.19	5.36
Technology adoption	0.35	2.87
Overall score		3.63

Table 4.6 shows that all variables had VIF values less than 10, with the average score being 3.63. This denoted no multicollinearity among independent variables. Moreover, tolerance values were above 0.1 confirmed that multicollinearity was not a problem in this study.

4.5.4 Autocorrelation

Autocorrelation represents mathematical degree of similarity of between given time series and delayed effect of itself over succeeding time intervals. Durbin-Watson tested autocorrelation and results are presented in Table 4.7.

Table 4.7

Durbin-Watson Test of autocorrelation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.734a	0.539	0.517	0.45291	1.708

a Predictors: (Constant), Technology adoption, Human capital competency, Financial awareness, Procurement process, Project appraisal
 b Dependent Variable: Financial performance

The finding indicates Durbin-Watson value of 1.708, which falls within the acceptable range of 0 to 4. It can therefore be concluded that the data has a positive autocorrelation since it is less than 2.

4.5.5 Heteroscedasticity

Heteroskedasticity occur when standard deviations of predicted variable when monitored over different values of independent variables are not constant. The study adopted the Breusch-Pagan test, and findings are shown in Table 4.8.

Table 4.8

Breusch-Pagan test for heteroskedasticity

Ho: Constant variance	
Variables: fitted values of y	
chi2(1)	= 0.43
Prob > chi2	= 0.5143

The findings in Table 4.8 indicate p-value of 0.5143 more than 0.05 denoting null hypothesis of constant variance of error was accepted. Consequently, heteroskedasticity problem was not presented in this study.

4.6 Finance Awareness and Financial Results

Study investigated relationship between finance awareness and financial performance of Public Universities Kenya. This section presents descriptive, correlation and simple regression results on the relationship between finance awareness and financial performance.

4.6.1 Descriptive results on financial awareness

Respondents were required to state whether they agree and to what extent with statements measuring financial awareness and results are presented in Table below. Results are presented in percentages, mean and standard deviation.

Table 4.9

Descriptive results on financial awareness

Statement	SD	D	N	A	SA	Mean	Std. Dev
Our staff understand the financial risk and its possible consequences on financial performance of the University.	0.0%	7.1%	10.6%	64.6%	17.7%	3.93	0.75
Our staff are conversant with saving culture and its advantages to the university.	0.9%	7.1%	26.5%	49.6%	15.9%	3.73	0.85
Our staff are aware and understand the finance procedures manual guidelines	1.8%	8.8%	14.2%	49.6%	25.7%	3.88	0.95
Our staff know the existence of debt policy and apply it in debt management.	7.1%	15.0%	46.0%	23.0%	8.8%	3.12	1.01

Results indicate that most respondents agreed with statement that staff understand the financial risk and its possible consequences on financial performance of the University (mean=3.93, SD=0.75), staff are conversant with saving culture and its advantages to the university (mean=3.73, SD=0.85), and staff are aware and understand the finance procedures manual guidelines (mean=3.88, SD=0.95). Further, the respondents moderately agreed that staff know the existence of debt policy and apply it in debt management (mean=3.12, SD=1.01). The results imply that financial awareness is critical in enhancing financial performance of the university. According to Lusardi (2013), financial literacy is a blended attributes namely awareness, skill, knowledge,

attitude and behavior in making financial decision for the good of human beings. Klapper et al. (2012) asserts that finance literacy is a combination of awareness, behavior attitude, skill and knowledge that are vital for sound financial decision making for peoples common good.

Respondents were also asked show how else financial awareness influences the financial performance in the university. According to the respondents, awareness enhances new development, helps in times of uncertainties, enhances online communication, and promotes efficiency. The results imply that financial awareness plays a critical role in enhancing financial performance.

4.6.2 Hypothesis Testing

The study used correlation analysis results to test the null hypothesis (H_{01}): Financial Awareness has no significant statistical influence on financial performance of public Universities in Kenya.

The findings are shown below

Table 4.10

Correlation between financial awareness and financial performance

		Financial performance	Financial awareness
Financial performance	Pearson Correlation	1	
	Sig. (2-tailed)		
Financial awareness	Pearson Correlation	.571**	1
	Sig. (2-tailed)	.000	
	N	113	113

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

The findings indicate “that financial awareness had positive and significant relationship with financial performance” ($r = .571, p = .000 < .05$). This infer that a change in financial awareness is associated with significant change in financial performance of public Universities in similar

direction. From the findings, “the null hypothesis was rejected denoting that financial awareness has a significant statistical influence on financial performance of public Universities in Kenya”.

The finding agrees with Menike (2019) who “found out that there was a high positive relationship between financial awareness and financial performance of the SMEs”. Wise (2013) also found out that the higher level of financial awareness the higher probability of preparing financial reports by the businesses. Further, Hamida et al. (2020) established that financial knowledge and attitude have significant effect on financial performance. Tuffour et al. (2020) showed a major relationship between financial awareness and financial performance. Kimunduu et al. (2016) revealed a significant relationship between awareness in finance and financial performance of these enterprises. Khatib et al. (2020) asserts that chief executive officers’ financial awareness has an impact on corporate financial performance of micro and small enterprises.

4.6.3 Simple Regression Analysis

Simple linear regression was conducted “to investigate the influence of financial awareness on financial performance of Public Universities in Kenya”. Table below indicates the model summary results.

Table 4.11

Modeling summary; financial awareness and financial performance

Model	R	R Square	Adj R Square	Std. Error of Estimate
1	.571a	0.326	0.32	0.53749

Table above presents R square values for extent of variation. The R-square value of 0.326 indicates that financial awareness explains 32.6% of variations in financial performance of public universities. The remaining 67.4% could be due to factors not in this model of study.

Table 4.12*ANOVA: financial awareness and financial performance*

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	15.5	1	15.5	53.651	.000b
	Residual	32.068	111	0.289		
	Total	47.567	112			

Results indicate F statistic of 53.651 and p-value calculated 0.000 is less than .05. This means that study model was excellent fit to predict the outcome variable. Therefore, financial awareness is satisfactory influencer of financial performance.

Table 4.13*Regression coefficients; financial awareness and financial performance*

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.993	0.258		3.844	0.000
	Financial awareness	0.511	0.07	0.571	7.325	0.000

a Dependent Variable: Financial performance

Findings in Table above shows that financial awareness had positive, material influence on financial results ($B = 0.511$, $p=.000<.05$), and this means that finance awareness significantly enhances financial performance of public universities, Kenya. The finding agrees with Mawad et al. (2022) who established that performance was directly affected by the level of financial awareness.

4.7 Human Capital Competency and Financial Performance

Study examined relation between human capital competency and financial results of Public Universities, Kenya. This section presents descriptive, correlation and simple regression results on relation between human capital competency and finance outcomes.

4.7.1 Descriptive results on human capital competency

Respondents were expected to state their level of agreement with statements that were measuring human capital competency and findings are presented in Table below. Results are presented in percentages, standard deviations and means.

Table 4.14

Descriptive results on human capital competency

	SD	D	N	A	SA	Mean	Std. Dev
There exist staff training policy and is implemented fully.	2.7%	17.7%	31.0%	29.2%	18.6%	3.80	3.96
Finance Staff possess required professional qualifications	0.0%	0.0%	5.3%	32.7%	61.9%	4.57	0.60
Organizational culture affects financial practices negatively	3.5%	22.1%	42.5%	21.2%	10.6%	3.13	1.00
Good Interpersonal relations among staff on financial matters exist.	0.0%	6.2%	21.2%	53.1%	19.5%	3.86	0.80

Results indicate that most respondents agreed with statement that there exist staff training policy and is implemented fully (mean=3.8, SD=0.96), finance staff possess required professional qualifications (mean=4.57, SD=0.60), and good interpersonal relations among staff on financial matters exist (mean=3.86, SD=0.8). Moreover, the respondents moderately agreed that organizational culture affects financial practices negatively (mean=3.13, SD=1.0). The results infer that human capital competency is essential in enhancing financial performance of the

university. According to Nasif et al (2018), efficient application human capital enhanced the financial achievements of these banks. Sardo and Serrasqueiro (2018) established that human capital was key in value creation of the firms. It is an important resource in the firm's wealth though not recorded as assets in the book of accounts.

Respondents were further asked to show how else human capital competency influences the financial performance in the university. According to the respondents, human capital competency motivates staff, enhances professionalism and also enhances quality of work. The results imply that human capital competency plays a critical role in enhancing financial performance.

4.7.2 Hypothesis Testing

The study used correlation analysis results to test the null hypothesis (H_{02}): Human capital competency has no significant statistical influence on financial performance of public Universities in Kenya. Findings are as in Table below.

Table 4.15

Correlation between human capital competency and financial performance

		Financial performance	Human capital competency
Financial performance	Pearson Correlation	1	
	Sig. (2-tailed)		
Human capital competency	Pearson Correlation	.549**	1
	Sig. (2-tailed)	.000	
	N	113	113

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

The findings indicate that human capital competency had positive and significant relationship with financial performance ($r = .549$, $p = .000 < .05$). This infer that a change in human capital

competency is associated with a significant change in financial performance of public Universities in similar direction. From the findings, the null hypothesis was rejected denoting human capital competency has significant statistical influence on finance outcomes of public Universities in Kenya.

The finding concurs with those Kim et al, (2016) who found out that feedback had effect on performance of the organization through human capital besides sharing of knowledge. Sardo et al. (2018) also established that human capital had positive and significant relationship with financial performance. Bontis et al. (2018) findings showed a positive relationship between human capital and economic performance. Rusmingsih et al. (2021) found significant connection between human capital and hotel industry performance. Helin et al. (2018) established that human capital has positive relationship with organizational performance. Further, Xu et al. (2019) found that eprofitability has a positive relationship with capital employed efficiency and Human capital efficiency.

4.7.3 Simple Regression Analysis

A simple linear regression was conducted to investigate the influence of human capital competency on financial performance of Public Universities in Kenya. Table below indicates model summary results.

Table 4.16

Summary; human capital competency and financial performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.549a	0.301	0.295	0.54721

Predictors: (Constant), Human capital competency

Table above present R square value for extent of variation. The R-square value of 0.301 indicates that human capital competency explains 30.1% of variations in financial performance of Public Universities. The remaining 69.9% could be attributable to other factors that are not included in this model of study

Table 4.17

ANOVA: human capital competency and financial performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.33	1	14.33	47.855	.000b
	Residual	33.238	111	0.299		
	Total	47.567	112			

The results indicate an F statistic of 47.855 and a p-value of 0.000 less than .05. This means that the model was statistically excellent fit in predicting outcome variable. Therefore, human capital competency is a satisfactory influencer of financial performance.

Table 4.18

Regression coefficients; human capital competency and financial performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.596	0.188		8.473	0.000
	Human capital competency	0.327	0.047	0.549	6.918	0.000

Dependent Variable: Financial performance

Findings in Table 4.18 shows that human capital competency had positive, significant influence on financial performance (B = 0.327, p = .000 < .05), and this implies that human capital competency significantly enhances financial performance of Public Universities in Kenya. The finding is

consistent with those of Isanzu (2015) who recorded a positive relationship between human capital and financial performance.

4.8 Procurement Process and Financial Performance

The study sought to find out the relationship between procurement process and financial performance of Public Universities in Kenya. This section presents descriptive, correlation and simple regression results on the relationship between procurement process and financial performance.

4.8.1 Descriptive results on procurement process

Respondents were required to state level of agreement with given statements measuring procurement process and results are as in Table below. Results are presented in percentages, standard deviations and means. The following scale was used: strongly disagree (1), disagree (2), neutral (3), agree (4), and strongly agree (5).

Table 4.19

Descriptive results on procurement process

Statement	SD	D	N	A	SA	Mean	Std. Dev
Quality of goods and services purchased are worth the amount paid.	2.7%	6.2%	15.9%	56.6%	18.6%	3.82	0.90
There is inspection and verification of goods and services received devoid of corruption.	0.0%	3.5%	10.6%	42.5%	43.4%	4.26	0.79
Evaluation and awards of tenders is conducted by experts	0.0%	6.2%	16.8%	50.4%	26.5%	3.97	0.83
Management ensures goods and services purchased are worth the amount paid for them.	1.8%	13.3%	15.0%	46.0%	23.9%	3.77	1.02

Results indicate that most of respondents agree with the statement that quality of goods and services purchased are worth the amount paid (mean=3.82, SD=0.9), there is inspection and verification of goods and services received devoid of corruption (mean=4.26, SD=0.79), evaluation and awards of tenders is conducted by experts (mean=3.77, SD=1.02), and management ensures goods and services purchased are worth the amount paid for them (mean=3.77, SD=1.02). The results infer that procurement process is essential in enhancing financial performance of the university. According to Awuah et al. (2022) procurement process measured by planning, monitoring and controlling affects firm performance.

Respondents were further asked to show how else procurement process influences the financial performance in the university. According to the findings, procurement enhances transparency and accountability, enhances timeliness in delivery of goods, reduces cost and enhances timely payments to suppliers. The results imply that procurement process plays a critical role in enhancing financial performance.

4.8.2 Hypothesis Testing

The study used correlation analysis results to test null hypothesis (H_{03}): Procurement process has no significant statistical influence on financial performance of public Universities in Kenya. Findings are shown in Table below.

Table 4.20*Correlation between procurement process and financial performance*

		Financial performance	Procurement process
Financial performance	Pearson Correlation	1	
	Sig. (2-tailed)		
Procurement process	Pearson Correlation	.674**	1
	Sig. (2-tailed)	.000	
	N	113	113

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

The finding indicate that procurement process had positive and material relation with financial outcomes ($r = .674$, $p = .000 < .05$). This imply that a change in procurement process is associated with a major change in financial results of public universities in similar direction. From the findings, the H0 was rejected denoting that procurement process has material statistical influence on finance results of public Universities, Kenya. Findings mirror those of Sobhani et al. (2014) who found relationship between procurement and financial performance. Sangok (2018) established that procurement process significantly influences firm performance. Georgino et al. (2021) findings were that the procurement process was directly and positively related to financial performances.

4.8.3 Simple Regression Analysis

Simplified linear regression was conducted to investigate influence of procurement process on financial performance of Public Universities, Kenya. Table 4.21 indicates the model summary results.

Table 4.21*Summary; procurement process and financial performance*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.674a	0.454	0.449	0.48359

(Constant), Procurement process

Table above present R square value for extent of variation. The R-square value of 0.454 indicated that procurement process explains 45.4% of variances in financial performance of public universities. The remaining 54.6% could be due to other causes not in model of study.

Table 4.22*ANOVA: procurement process and financial performance*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.609	1	21.609	92.405	.000b
	Residual	25.958	111	0.234		
	Total	47.567	112			

Dependent Variable: Financial performance

Predictors: (Constant), Procurement process

Results indicate an F statistic of 92.405 and a p-value of 0.000 less than .05. This means that model was statistically excellent fit in predicting outcome variable. Therefore, procurement process is a satisfactory influencer of financial performance.

Table 4.23*Regression coefficients; procurement process and financial performance*

Mode	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.519	0.247		2.106	0.037
Procurement process	0.589	0.061	0.674	9.613	0.000

Dependent Variable: Financial performance

Findings in Table 4.23 shows that procurement process had positive and material influence on financial results (B = 0.589, $p=0.000<.05$), and this implies that procurement process significantly enhances financial results of public universities, Kenya. These results mirror those of Georgino et al, (2021) who found that procurement process was directly and positively related to financial performances.

4.9 Project Appraisal and Financial Performance

The study sought to check whether there is relationship between project appraisal and financial outcome of the Public Universities, Kenya. This section presents descriptive, correlation and simple regression results on the relationship between project appraisal and financial performance.

4.9.1 Descriptive results on project appraisal

Respondents were requested to state their level of agreement with statements measuring project appraisal and results are in Table below. The results are presented in percentages, mean and standard deviation.

Table 4.24*Descriptive results on project appraisal*

Statement	SD	D	N	A	SA	Mea n	Std. Dev
Projects to be undertaken are appraised using scientific methods.	3.5%	8.8%	32.7%	47.8%	7.1%	3.46	0.89
Projects are implemented as per schedule in the contract.	0.0%	10.6%	31.9%	47.8%	9.7%	3.57	0.81
Projects are diligently monitored to ensure quality is observed	0.0%	7.1%	17.7%	50.4%	24.8%	3.93	0.84
There is constant flow of cash to finance projects according to budget	8.8%	34.5%	30.1%	19.5%	7.1%	2.81	1.07

Findings indicate that most of respondents agree with statement that projects are implemented as per schedule in the contract (mean=3.57, SD=0.81), AND Projects are diligently monitored to ensure quality is observed (mean=3.93, SD=0.84). Respondents moderately agreed that projects to be undertaken are appraised using scientific methods (mean=3.46, SD=0.89). Further, the respondents moderately agreed that there is constant flow of cash to finance projects according to budget (mean=2.81, SD=1.07). The results denote that project appraisal is important in enhancing financial performance of the university. Glenday et al. (2014) in their paper on approaches to better project appraisal, listed a number of bottlenecks to the investment process as high capital projects, negative rates of return; delayed completion of projects and weak project appraisal. Marcin and Dariusz (2020) established that project appraisal was critical in enhancing financial performance.

The respondents were further asked to explain how else project appraisal influences the financial performance in the university. Based on the results, project appraisal enhances resource allocation and financial returns of organizations. The results imply that project appraisal plays a critical role in enhancing financial performance.

4.9.2 Hypothesis Testing

The study used correlation analysis results to test the null hypothesis (H_{04}): Project appraisal has no significant statistical influence on financial performance of public Universities in Kenya. The findings are shown below.

Table 4.25

Correlation between project appraisal and financial performance

		Financial performance	Project appraisal
Financial performance	Pearson Correlation	1	
	Sig. (2-tailed)		
Project appraisal	Pearson Correlation	.626**	1
	Sig. (2-tailed)	.000	
	N	113	113

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

Findings indicate that project appraisal had positive, material relation with financial performance ($r = .626, p = .000 < .05$). This implies that a change in project appraisal is associated with a material change in financial outcomes of public universities in similar direction. From findings, the H_0 was rejected denoting that project appraisal has material statistical influence on financial performance of public Universities in Kenya. These findings are similar to those of Marcin and Dariusz (2020) who established that project appraisal was critical in enhancing financial performance. Hulbert and Vammalle (2014) supported enhancing investment appraisal decision making. Batra and Verma (2017) linked capital budgeting practices to firm profitability.

4.9.3 Simple Regression Analysis

Simple linear regression was conducted to investigate influence of project appraisal on financial performance of Public Universities, Kenya. Table 4.26 indicates the model summary results.

Table 4.26*Model summary; project appraisal and financial performance*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.626a	0.392	0.386	0.51052

(Constant), Project appraisal

Table above present R square value for extent of variation. The R-square value of 0.392 indicates that project appraisal explains 39.2% of variations in financial performance of public universities. The remaining 60.8% could be due to other factors not part of this model.

Table 4.27*ANOVA: project appraisal and financial performance*

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	18.638	1	18.638	71.51	.000b
	Residual	28.93	111	0.261		
	Total	47.567	112			

Dependent Variable: Financial performance

Predictors: (Constant), Project appraisal

Results indicate F statistic of 71.51 and a p-value 0.000 which is less than .05. This means the model was statistically excellent fit in predicting outcome variable. Therefore, project appraisal is a satisfactory influencer of financial performance.

Table 4.28*Regression coefficients; project appraisal and financial performance*

Mode 1	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
1 (Constant)	0.834	0.243		3.43	0.00
Project appraisal	0.585	0.069	0.626	8.45	0.00

a Dependent Variable: Financial performance

Findings in Table 4.28 shows that project appraisal had positive and material influence on financial performance ($B = 0.585$, $p = .000 < .05$), and this implies that project appraisal significantly enhances financial performance of public universities. Findings agree with those of Batra and Verma, (2017) who linked capital budgeting practices to firm profitability.

4.10 Technology Adoption and Financial results of Public Universities in Kenya

Study assessed relationship between technology adoption and financial performance of the Public Universities, Kenya. This section presents descriptive, correlation and simple regression results on the relation between technology adoption and finance performance.

4.10.1 Descriptive results on technology adoption

Respondents were requested to state how much they agree with statements measuring technology adoption and results are as presented, Table 4.29. Results are presented in percentages, mean and standard deviation.

Table 4.29*Descriptive results on technology adoption*

Statement	SD	D	N	A	SA	Mean	Std. Dev
There is adequate IT infrastructure.	1.8%	8.8%	12.4%	48.7%	28.3%	3.93	0.96
Mobile banking is adopted in collection of fees	0.9%	3.5%	9.7%	50.4%	35.4%	4.16	0.81
Staff possess required technological skills.	0.0%	0.9%	11.5%	58.4%	29.2%	4.16	0.65
Internet banking enhances efficiency	0.9%	0.0%	1.8%	39.8%	57.5%	4.53	0.63

Findings indicated that majority of respondents agreed with statement that there is adequate IT infrastructure (mean=3.93, SD=0.96), mobile banking is adopted in collection of fees (mean=4.16, SD=0.81), staff possess required technological skills (mean=4.16, SD=0.65), and internet banking enhances efficiency (mean=4.53, SD=0.63). The results imply that technology adoption is critical in enhancing financial performance of the university. Hannon et al, (2021) results showed that over 70% over the banks in the island applied technology in their operations. Further, they found that financial technology had material effect on firm results.

Respondents were further asked to show how else technology adoption influences the financial performance in the Universities. According to the findings, technology adoption promotes efficiency, enhances retrieval of data and saves time, ensures transparency, encourages innovation, promotes competitive advantage and ensures security of data. The results infer that technology adoption plays a critical role in enhancing financial performance.

4.10.2 Hypothesis Testing

The study used correlation analysis results to test the (H₀₅): Technology adoption has no significant statistical influence on financial results of public Universities, Kenya. Findings are as shown below.

Table 4.30

Correlation between technology adoption and financial performance

		Financial performance	Technology adoption
Financial performance	Pearson Correlation	1	
	Sig. (2-tailed)		
Technology adoption	Pearson Correlation	.645**	1
	Sig. (2-tailed)	.000	
	N	113	113

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

The findings reveal that technology adoption had positive, significant relationship with financial performance ($r = .645$, $p = .000 < .05$). This imply that a change in technology adoption is associated with a material change in financial results of public universities in similar direction. From the findings, the H₀₅ was rejected denoting that technology adoption has material statistical influence on finance results of public Universities, Kenya.

Findings relate to those of Liu et al. (2023) who showed that there is a positive relationship between the digital economy and green total factor productivity. Kusuma and Christin (2022) also found out that technology has significant positive relation with financial performance in the financial services delivery. Kamatra et al. (2022) showed that there is positive relationship between the technology and financial performance.

4.10.3 Simple Regression Analysis

Simplified linear regression was conducted to investigate influence of technology adoption on financial performance of Public Universities, Kenya. Table 4.31 indicates the model summary results.

Table 4.31

Model summary; technology adoption and financial performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.645a	0.417	0.411	0.49998

(Constant), Technology adoption

Table above present R square value for extent of variation. The R-square value of 0.417 indicates that technology adoption explains 41.7% of variations in financial performance of public universities. The remaining 58.3% could be attributed to other factors not in this study model.

Table 4.32

ANOVA: technology adoption and financial performance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	19.82	1	19.82	79.285	.000b
	Residual	27.748	111	0.25		
	Total	47.567	112			

a Dependent Variable: Financial performance

b Predictors: (Constant), Technology adoption

Results indicate an F statistic of 79.285 and a p-value 0.000 which is less than .05. This means that the model was statistically excellent fit in predicting outcome variable. Therefore, financial adoption is a satisfactory influencer of finance performance. Results are same as those of Matevu

and Kerongo (2015) who found a significant relationship between technological innovations and performance of organizations.

Table 4.33

Regression coefficients; technology adoption and financial performance

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-0.281	0.355		-0.791	0.43
Technology adoption	0.746	0.084	0.645	8.904	0.000

a Dependent Variable: Financial performance

Findings in Table 4.33 shows that technology adoption had positive and material influence on financial results (B = 0.746, $p=0.000<.05$), and this implies that technology adoption significantly enhances finance performance of public universities, Kenya.

4.11 Internal Audit Practices and Financial Performance

The study sought to evaluate moderating effect of internal audit practices of financial sensitization on financial results of Public Universities. This section presents descriptive results on the relation between internal audit practices and financial performance.

4.11.1 Descriptive results on internal audit practices

Respondents were requested to state their agreement level with statements measuring internal audit practices and results are as presented, Table 4.34. The results are presented in percentages, mean and standard deviation.

Table 4.34*Descriptive results on internal audit practices*

Statement	SD	D	N	A	SA	Mea n	Std. Dev
The frequency of internal audits has an impact on financial performance in the university	1.8%	1.8%	1.8%	63.7%	31.0%	4.20	0.72
The size of the internal audit in terms of staff numbers has an impact on financial performance in the university	1.8%	6.2%	23.0%	55.8%	13.3%	3.73	0.84
The independence of internal auditors has an impact on financial performance in the university	1.8%	7.1%	3.5%	50.4%	37.2%	4.14	0.92
The quality of internal audits has an impact on financial performance in the university	1.8%	3.5%	5.3%	60.2%	29.2%	4.12	0.80

Results reveal that most respondents agreed with statement that frequency of internal audits has an impact on financial performance in the university (mean=4.2, SD=0.72), the size of the internal audit in terms of staff numbers has an impact on financial performance in the university (mean=3.73, SD=0.84), the independence of internal auditors has an impact on financial performance in the university (mean=4.14, SD=0.92), and the quality of internal audits has an impact on financial performance in the university (mean=4.12, SD=0.80). The finding infer that internal audit practices play critical role in enhancing financial performance of university.

Respondents were further asked to explain how else internal audit practices influence the financial performance in public universities. According to the findings, internal audit practices bring efficiency and prevents fraud, audit enhances integrity, audit enhance governance, and audit enhances risk assessment. The results imply that internal audit practices are important determinants of financial performance.

4.12 Financial Performance of Public Universities in Kenya

The study's dependent variable was financial performance of public university in Kenya.

4.12.1 Descriptive results on financial performance

Respondents were urged to state their level of agreement with statements measuring financial performance and results are in Table below. Results are presented in percentages, mean and standard deviation.

Table 4.35

Descriptive results on financial performance

Statement	SD	D	N	A	SA	Mean	Std. Dev
Growth of assets in your University has been on the rise in the last 5 years	14.2%	14.2%	38.1%	17.7%	15.9%	3.07	1.24
The university has been able to meet her daily obligations with ease in the last 5 years	13.3%	37.2%	22.1%	21.2%	6.2%	2.70	1.13
The university has been posting surpluses in the last 5 years	36.3%	35.4%	18.6%	7.1%	2.7%	2.04	1.04
Amount of pending bills in your university has been growing for the last 5 years	9.7%	10.6%	22.1%	26.5%	31.0%	3.58	1.29

Results reveal that most respondents agree with statement that amount of pending bills in the Universities has been growing for the last 5 years (mean=3.58, SD=1.29). The respondents moderately agreed that growth of assets in the university has been on the rise in the last 5 years. Conversely, majority of respondents disagreed that the universities have been able to meet her daily obligations with ease in the last 5 years (mean=2.7, SD=1.13), and the universities have been posting surpluses in the last 5 years (mean=2.04, SD=1.04). The results imply that financial performance of public universities has not been good.

4.12.2 Trend Analysis

This section indicates results on public universities' financial performance trends for the past 5 financial years.

Figure 4.6

Trend of Total Assets

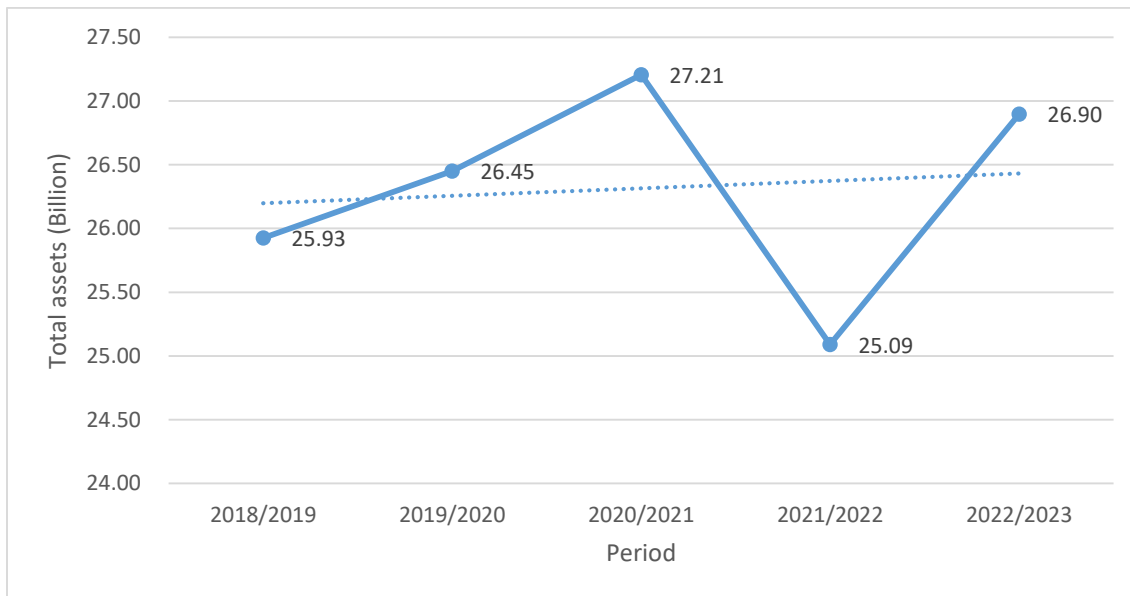


Figure 4.6 shows fluctuations in total assets throughout the measurement period. Generally, the trend line indicates slight increase in total assets of public universities. The results imply that public universities have not been doing well in regard to growth of total assets.

Figure 4.7

Trend of current ratio

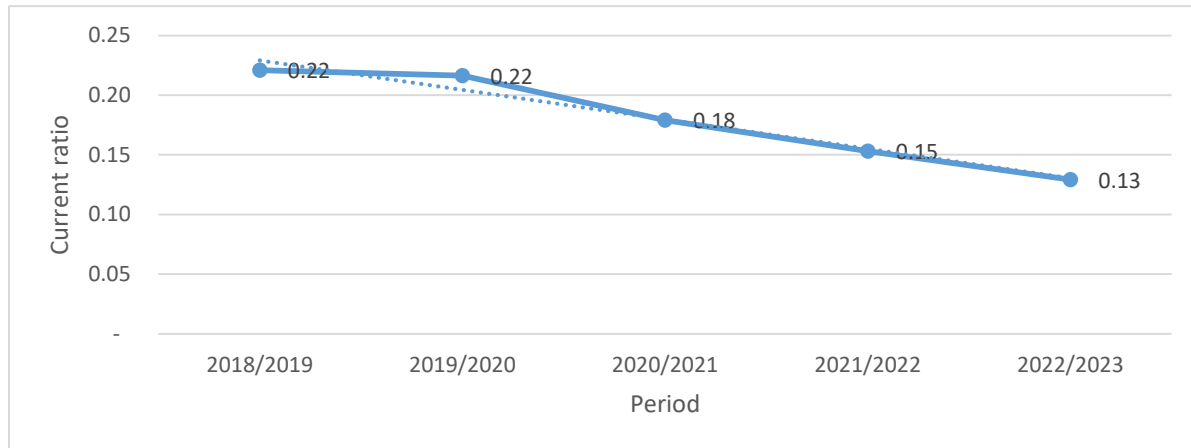


Figure 4.7 shows decline in current ratio throughout the measurement period. Generally, the trendline indicates decrease in current ratio of public universities. The results imply that public universities' current liabilities have been increasing at a higher rate compared to their current assets.

Figure 4.8

Trend of pending bills

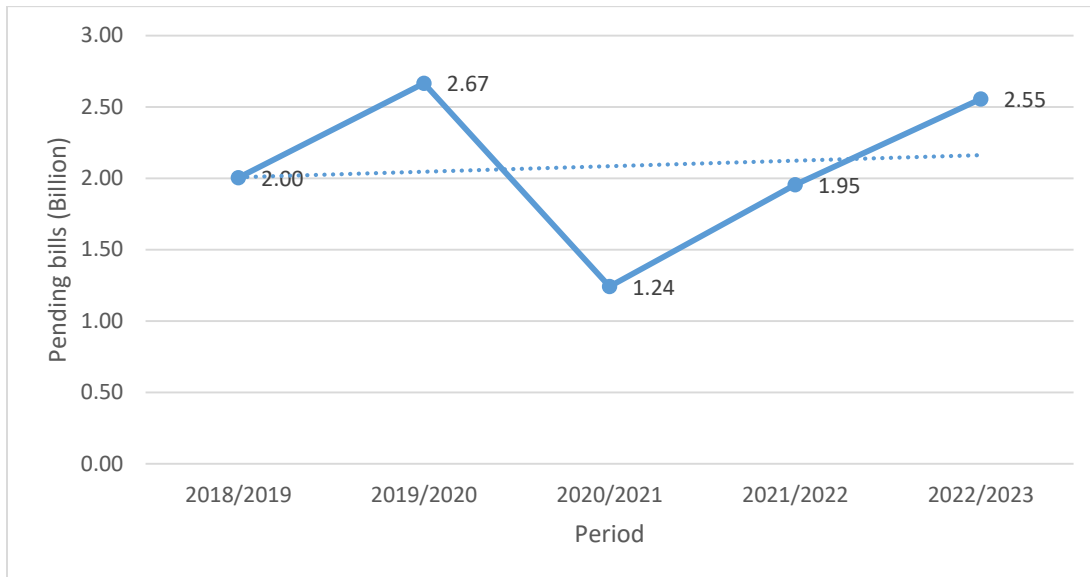


Figure 4.8 shows fluctuations in pending bills throughout the measurement period. Generally, the trendline indicates slight increase in pending bills of public universities. The results imply that public universities' pending bills have been increasing.

Figure 4.9

Trend of surplus(profit)/deficit(loss)

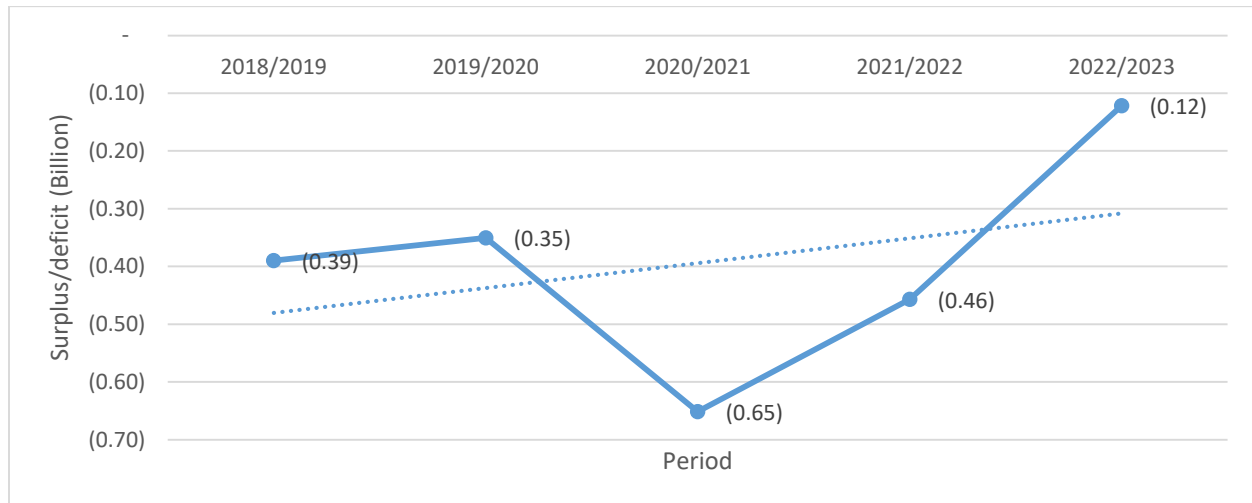


Figure 4.9 shows deficit (negative values) throughout the study period. The results infer that public universities' have been experiencing deficit in the past 5 years.

4.13 Overall Effect of Financial Sensitization on Financial Performance of Public Universities, Kenya

Multiple regression analysis was conducted to determine the relationship between financial sensitization and financial performance of public universities. The model summary, analysis of variance and regression coefficients results are presented in Table 4.19, 4.20, and 4.21 respectively.

Table 4.36*Model Summary; financial sensitization influence on financial performance*

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	.734a	0.539	0.517	0.45291

a Predictors: (Constant), Technology adoption, Human capital competency, Financial awareness, Procurement process, Project appraisal

Table 4.36 indicates an R square of 0.539, denoting that jointly financial sensitization components explained 53.9% of variations in financial performance of public universities. The remaining 46.1% could be attributed to other factors not in this study model. The results imply that financial sensitization components are strong determinants of financial performance in public universities.

Table 4.37*Analysis of variance; financial sensitization influence on financial performance*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25.619	5	5.124	24.979	.000b
	Residual	21.948	107	0.205		
	Total	47.567	112			

Dependent Variable: Financial performance
(Constant), Technology adoption, Human capital competency, Financial awareness, Procurement process, Project appraisal

Results indicate F statistic of 24.979 and a p-value 0.000 less than .05. This means that study model was statistically excellent fit in predicting outcome variable. Therefore, financial sensitization components are satisfactory influencers of financial performance.

Table 4.38*Coefficients; financial sensitization influence on financial performance*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-0.141	0.326		-0.432	0.666
Financial awareness	0.028	0.105	0.031	0.262	0.794
Human capital competency	0.15	0.047	0.252	3.212	0.002
Procurement process	0.271	0.132	0.31	2.05	0.043
Project appraisal	0.039	0.142	0.041	0.272	0.786
Technology adoption	0.264	0.129	0.229	2.056	0.042

a Dependent Variable: Financial performance

Regression Equation

Financial performance = -0.141+ 0.15 human capital competency+0.271 procurement process+0.264 technology adoption+0.028 financial awareness+0.039 project appraisal

Findings in Table 4.38 shows human capital competency had positive and material influence on financial results (B = 0.15, p=.002<.05), and this implies that human capital competency significantly enhances financial performance of public universities in Kenya. The finding is consistent with those of Isanzu (2015) who recorded a positive relationship between human capital and financial performance in the banks. Onyekwelu et al. (2017) also found that human capital has significant effect on the performance of the banks. Dearden et al. (2014) findings revealed there is strong positive relation between development and training costs and the financial performance of the firms. Ofurum et al. (2023) discovered that human capital and structural (cultural) capital had positive relationship with financial performance. Asutay and Ubaidillah (2023) established that human capital had statistical relationship with financial performance specifically profitability.

Further, Mehd (2021) results showed positive relation between human capital and corporate profitability.

Procurement process had positive and high influence on financial results ($B = 0.271, p = .043 < .05$), and this implies that procurement process significantly enhances financial performance of public universities, Kenya. The findings mirror those of Sobhani et al. (2014) who found relationship between procurement and financial performance. Sangok (2018) established that procurement process significantly influences firm performance. Georgino et al. (2021) findings were that the procurement process was directly and positively related to financial performances.

Technology adoption had positive and high influence on financial outcomes ($B = 0.264, p = .042 < .05$), and this implies that technology adoption significantly enhances financial outcomes of public universities, Kenya. Results of the research are consistent with those of Farouk and Dandago (2015) who showed relationship between technology and dependent variable in the banks. Matevu and Kerongo (2015) also found a high relationship between technological innovations and performance of organizations.

The finding further indicates that financial awareness had positive but insignificant influence on financial performance ($P = 0.794 > 0.05$). The finding disagrees with those of Mawad et al. (2022) who established that performance was directly affected by the level of financial awareness. The results also contradicted Usama and Yusoff (2020) assertion that financial awareness significantly affected financial performance on businesses.

The finding indicated that project appraisal had positive but insignificant influence on financial performance ($P = 0.786 > 0.05$). The findings disagree with those of Marcin and Dariusz (2020) who established that project appraisal was critical in enhancing financial performance. Hulbert and

Vammalle (2014) supported enhancing investment appraisal decision making. Batra and Verma (2017) linked capital budgeting practices to firm profitability.

4.14 Results on moderating effect of Internal Audit Practices

Study sought to evaluate moderating effect of internal audit practices of financial sensitization on financial results of Public Universities. Hierarchical regression modelling was used to determine moderation effect. Findings are presented as below.

Table 4.39

Summary moderation Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
Model 1	(Constant)	-.141	.326		-.432	.666
	Financial awareness	.028	.105	.031	.262	.794
	Human capital competency	.150	.047	.252	3.212	.002
	Procurement process	.271	.132	.310	2.050	.043
	Project appraisal	.039	.142	.041	.272	.786
	Technology adoption	.264	.129	.229	2.056	.042
	R-square	0.539				
	F statistic	24.979				
	Prob > F	0.000				
	Model 2	(Constant)	-.376	.332		-1.132
Financial awareness		.001	.104	.002	.014	.989
Human capital competency		.134	.046	.226	2.911	.004
Procurement process		.248	.130	.284	1.914	.058
Project appraisal		-.051	.144	-.055	-.357	.721
Technology adoption		.198	.128	.171	1.543	.126
Internal audit practices		.264	.107	.261	2.474	.015
R-square		0.564				
F statistic		22.831				
Prob > F		0.000				
Model 3	(Constant)	2.318	1.677		1.382	.170

Financial awareness	-.493	.665	-.551	-.742	.460
Human capital competency	.011	.662	.018	.016	.987
Procurement process	1.012	.754	1.158	1.341	.183
Project appraisal	-.856	.648	-.916	-1.322	.189
Technology adoption	-.080	.624	-.069	-.129	.898
Internal audit practices	-.300	.390	-.296	-.769	.443
Financial awareness*moderator	.107	.167	.790	.637	.526
Human capital competency*moderator	.020	.134	.200	.148	.883
Procurement process*moderator	-.185	.191	-1.433	-.968	.335
Project appraisal*moderator	.214	.175	1.509	1.220	.225
Technology adoption*moderator	.049	.166	.338	.295	.769
R-square	0.585				
F statistic	12.958				
Prob > F	0.000				

Dependent Variable: Financial performance

Findings in Table 4.39 indicated moderator (internal audit practices) had positive and material influence on financial results of public universities ($\beta = 0.264$, $p = .015 < 0.05$). The implication is that internal audit practices play a major role in influencing financial results of public universities.

From Table 4.39, models 1 to 3 shows R- square of between 0.539 and 0.585. The R square change from 53.9% to 58.5% indicates that introduction of internal audit practices (moderator) increases the power of financial sensitization in explaining variations in financial performance of public universities. However, p values for all variables with moderator were more than 0.05 indicating an insignificant statistical influence. Results infer that internal audit practices have a higher but insignificant moderator influence on relation between financial sensitization and financial results in Public Universities in Kenya. From findings, the null hypothesis was rejected denoting internal audit practices have significant statistical influence on relationship between financial sensitization and financial performance in Public Universities, Kenya. These findings agree with those of

Saddam et al. (2021) who established that audit practices internally relate positively with how organizations perform financially. Similarly, Awdat (2015) found that internal processes of audit positively relate to the performance of banks. Moreover, Muchiri and Jagongo (2017) observed that internal audit plays a big role on finance scores.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter is a summary of major results as well as conclusion and recommendations. The aim of study was finding out relation between financial sensitization and financial performance of public universities, Kenya and the moderating effect of internal audit practices. Specific objectives focused on the influence of finance awareness, human capital competency, procurement process, project appraisal, and technology adoption on financial outcomes of the Public Universities, Kenya. Study also evaluated moderating effect of internal audit practices of financial sensitization on financial results of Public Universities. Study was based on Resource based Theory, Agency Theory, Motivation Theory and Prospect Theory. Study employed realism philosophy was adopted to help in understanding the assumptions and used correlational design type of research. Targeted population was public universities, Kenya with a purposive sample of 155 managers selected from three categories of universities according to their age and when they were chartered. Data was obtained using semi-structured questionnaire, Descriptive statistics and inferential analysis were utilized on quantitative data while content analysis was employed on qualitative data.

5.2 Summary of Findings

Summary of the findings was done according main results including demographic information, descriptive findings, correlation and regression results.

5.2.1 Summary on background information of respondents

The finding indicated that male respondents (54%) were more compared to female (46%). The results indicated that (46%) of the respondents had bachelor degrees, (40.7%) had masters, 8%

PhD and 5.3% diploma. The finding revealed that 65.5% of respondents had worked in university for over 10 years, 20.4% had worked for 6-10 years, 8.8% for 1-5 years, and only 5.3% has worked for less than 1 year. Results further showed that 34.5% of respondents had worked in current position for 1-5 years, 31.9% for over 10 years, 25.7% for 6-10 years, and 8% for less than 1 year. Lastly, 33.36% of respondents were aged 41-50 years, 29.2% were over 50 years, 28.3% were 31-40 years while 8.8% were 20-30 years.

5.2.2 Finance awareness and financial performance of Public Universities in Kenya

First objective of study was to investigate relationship between finance awareness and financial results of Public Universities, Kenya. Descriptive findings revealed that staff understand the financial risk and its possible consequences on financial performance of the University, staff are conversant with saving culture and its advantages to the university, and staff are aware and understand the finance procedures manual guidelines. Further, staff know the existence of debt policy and apply it in debt management.

Correlation analysis results indicates financial awareness had positive and high relation with financial performance ($r = .571$, $p = .000 < .05$). From the findings, the H_0 was rejected denoting that financial awareness has material statistical effect on financial results of public Universities in Kenya. However, multiple regression findings revealed that financial awareness had non negative, material influence on financial performance ($P = 0.794 > 0.05$).

5.2.3 Human capital competency and Financial results of Public Universities in Kenya

Second objective of study was to examine relationship between human capital competency and financial results of Public Universities, Kenya. Descriptive findings revealed that there exist staff training policy and is implemented fully, finance staff possess required professional qualifications,

and good interpersonal relations among staff on financial matters exist. Moreover, organizational culture affects financial practices negatively.

Correlation analysis results indicate that capital competency had positive and high relationship with financial performance ($r = .549$, $p = .000 < .05$). From the findings, the H_0 was rejected denoting human capital competency has significant statistical influence on financial outcome of public Universities, Kenya. Multiple regression revealed human capital competency had positive and high influence on financial results ($\beta = 0.15$, $p = .002 < .05$).

5.2.4 Procurement process and financial performance.

Third objective of study was to find out relationship between procurement process and financial results of Public Universities, Kenya. Descriptive findings revealed that quality of goods and services purchased are worth the amount paid, there is inspection and verification of goods and services received devoid of corruption, evaluation and awards of tenders is conducted by experts, and management ensures goods and services purchased are worth the amount paid for them.

Correlation analysis results indicate that procurement process had positive and high relationship with financial performance ($r = .674$, $p = .000 < .05$). From the findings, the null hypothesis was rejected denoting that procurement process has a significant statistical influence on financial performance of public Universities, Kenya. Multiple regression showed that procurement process had positive and significant influence on financial performance ($B = 0.271$, $p = .043 < .05$).

5.2.5 Project appraisal and financial performance of Public Universities in Kenya

Fourth objective of study was to check whether there was relationship between project appraisal and financial outcome of the Public Universities, Kenya. Descriptive findings revealed that projects are implemented as per schedule in the contract, projects are diligently monitored to

ensure quality is observed. Respondents moderately agreed that projects to be undertaken are appraised using scientific methods and there is constant flow of cash to finance projects according to budget.

Correlation analysis results indicated that project appraisal had positive and high relationship with financial performance ($r = .626$, $p = .000 < .05$). From the findings, the H_0 was rejected denoting that project appraisal has a significant statistical influence on financial performance of public Universities in Kenya. Multiple regression showed that procurement process had positive and significant influence on financial results ($\beta = 0.271$, $p = .043 < .05$). However, multiple regression findings showed that project appraisal had positive, insignificant influence on financial performance ($P = 0.786 > 0.05$).

5.2.6 Technology adoption and financial performance

Fifth objective was to assess relation between technology adoption and financial results of the Public Universities, Kenya. Descriptive findings revealed that there is adequate IT infrastructure, mobile banking is adopted in collection of fees, staff possess required technological skills, and internet banking enhances efficiency.

Correlation analysis results indicate that technology adoption had positive and significant relationship with financial performance ($r = .645$, $p = .000 < .05$). From the findings, the H_0 was rejected denoting that technology adoption has a significant statistical influence on financial performance of public Universities, Kenya. Multiple regression showed that technology adoption had positive, significant influence on financial performance ($B = 0.264$, $p = .042 < .05$).

5.2.7 Internal audit practices and financial performance of Public Universities in Kenya

Sixth objective sought to evaluate moderating effect of internal audit practices of financial sensitization on financial results of Public Universities. Descriptive findings revealed the frequency of internal audits has impact on finance performance in university, size of the internal audit in terms of staff numbers has impact on finance performance in university, independence of internal auditors has impact on finance performance in university, and quality of internal audits has impact on financial performance in university.

Further, findings indicated that interaction term (Financial sensitization*internal audit practices) had positive and high influence on financial results of public universities ($\beta = 0.09$, $p = .004 < 0.05$). The results infer that internal audit practices have positive and material moderating influence on relationship between financial sensitization and financial performance in Public Universities, Kenya. Based on findings, the null hypothesis was rejected denoting internal audit practices have significant statistical influence on relationship between financial sensitization and financial performance in Public Universities, Kenya.

5.2.8 Summary results on financial performance

Dependent variable in study was financial results of public universities. Descriptive results showed that amount of pending bills in the university has been growing for the last 5 years. The growth of assets in the university has been on the rise in the last 5 years. Further, the university has not been able to meet her daily obligations with ease in the last 5 years, and the university has not been posting surpluses in the last 5 years.

5.3 Conclusion

This section provides conclusions of study in line with study findings and objectives.

5.3.1 Finance awareness and financial results of Public Universities, Kenya

Study concludes financial awareness had positive and high relationship with financial performance. The implication is that financial awareness contributes significantly to enhanced financial outcomes of public universities. In particular, the staff understand the financial risk and its possible consequences on financial performance of the University. The staff are conversant with saving culture and its advantages to the university. The staff are aware and understand the finance procedures manual guidelines. Finally, the staff know the existence of debt policy and apply it in debt management. The null hypothesis that financial awareness has no significant statistical influence on financial performance of public Universities, Kenya was rejected.

5.3.2 Human capital competency and financial results of Public Universities in Kenya

Study concludes that human capital competency had positive, material relationship with financial results. The implication is that human capital competency contributes significantly to enhanced financial performance of public universities. In particular, there exist staff training policy, finance staff possess required professional qualifications, there is good interpersonal relations among staff on financial matters and organizational culture affects financial practices negatively. The null hypothesis that human capital competency has no significant statistical influence on financial performance of public Universities in Kenya was rejected.

5.3.3 Procurement process and financial results of Public Universities in Kenya

Study concludes that procurement process had positive and high relationship with financial performance. The implication is that procurement process contributes significantly to enhanced financial performance of public universities. Notably, quality of goods and services purchased are worth the amount paid, there is inspection and verification of goods and services received devoid of corruption, evaluation and awards of tenders is conducted by experts, and management ensures

goods and services purchased are worth the amount paid for them. The null hypothesis that procurement process has no significant statistical influence on financial performance of public Universities in Kenya was rejected.

5.3.4 Project appraisal and financial results of Public Universities, Kenya

Study concludes that project appraisal had positive and high relationship with financial performance. The implication is that project appraisal contributes significantly to enhanced financial performance of public universities. Specifically, projects are implemented as per schedule in the contract, projects are diligently monitored to ensure quality. Further, projects are appraised using scientific methods, and there is constant flow of cash to finance projects according to budget. The null hypothesis that project appraisal has no significant statistical influence on financial performance of public Universities in Kenya was rejected.

5.3.5 Technology adoption and financial results of Public Universities in Kenya

Study concluded that technology adoption had positive and high relationship with financial performance. The implication is that technology adoption contributes significantly to enhanced financial performance of public universities. Specifically, there is adequate IT infrastructure, mobile banking is adopted in collection of fees, staff possess required technological skills, and internet banking enhances efficiency. The null hypothesis that technology adoption has no significant statistical influence on financial performance of public Universities in Kenya was rejected.

5.3.6 Internal audit practices and finance outcomes of Public Universities in Kenya

Study concludes that internal audit practices had positive and high moderating influence on relation between financial sensitization and financial performance of public universities, Kenya.

Implication is that introduction of internal audit practices enhances the influence of financial sensitization on financial performance of public universities, Kenya. Specifically, frequency of internal audits has impact on financial performance in the university, the size of the internal audit in terms of staff numbers has an impact on financial performance in the university, the independence of internal auditors has an impact on financial performance in the university, and the quality of internal audits has impact on financial performance in the university. The null hypothesis that moderation by internal audit practices do not have significant statistical influence on the correlation between financial sensitization and financial performance in Public Universities, Kenya was rejected.

5.3.7 Conclusion results on financial performance

Study concluded that financial performance of public universities was not good. Notably, the amount of pending bills has been growing for the last 5 years, the institutions have not been able to meet her daily obligations with ease in the last 5 years, and they have not been posting surpluses in the last 5 years.

5.4 Recommendation

This part outlines recommendations on research results, implications on policy and practice. Theory is also affected.

5.4.1 Recommendations on study results

5.4.1.1 Finance Awareness and Financial results of Public Universities in Kenya

Study findings found that financial awareness had positive and material relationship with financial performance. Study recommended that management of public universities should strengthen aspects relating to financial awareness. In particular, the management should ensure that the

employees understand financial risk as well as saving culture. The management should also equip employees with knowledge on financial procedures and debt policy.

5.4.1.2 Human capital competency and Financial results of Public Universities in Kenya

Study findings demonstrated that human capital competency had positive and high relation with financial results. Study recommends that management of public universities should strengthen aspects relating to human capital competency. There is need to review staff training policy with the aim of achieving better outcome. The recruitment process should be reviewed to ensure that competent and qualified staff are absorbed. The management should also promote good interpersonal relations among staff on financial matters. Further, the management should inculcate good culture within the organization.

5.4.1.3 Procurement process and Financial Performance of Public Universities in Kenya

Study findings demonstrated that procurement process had positive and high relation with financial results. Study recommends that management of public universities should strengthen aspects relating to procurement process. There is need to ensure that quality of goods and services purchased are up to standard. There should be inspection and verification of goods and services. There is also need to involved experts in evaluation and awards of tenders.

5.4.1.4 Project appraisal and Financial Performance of Public Universities in Kenya

Study findings demonstrated that project appraisal had positive and high relation with financial results. Study recommends that management of public universities should strengthen aspects relating to project appraisal. There is need to ensure that projects are implemented as per schedule in the contract. Projects should be diligently monitored to ensure quality. Further, projects should

be appraised using scientific methods. The management to ensure that there is constant flow of cash to finance projects according to budget.

5.4.1.5 Technology adoption and Financial Performance of Public Universities in Kenya

Study findings established that technology adoption had positive and high relation with financial results. Study hereby recommends that management of public universities should strengthen aspects relating to technology adoption. There is need to invest in IT infrastructure. Financial innovations such as mobile phone banking and internet banking to be adopted in collection of fees. Further, staff should be trained on necessary technological skills.

5.4.1.7 Internal audit practices and Financial Results of Public Universities, Kenya

Study findings established that internal audit practices had positive and high moderating influence on the relation between financial sensitization and financial results of public universities, Kenya. This study recommended that management of public universities should strengthen aspects relating to internal audit practices. There is need for frequent internal audits in the institutions. Management should build the capacity of internal audit team in terms of personnel and training. Internal audit team should be given necessary space to operate with no interference. Further, the management to ensure that quality of internal audits is upheld.

5.4.2 Implication Practice and Practice

Study finding contribute significantly to practice and policy in field of financial management. In terms of policy implications, study informs policymakers including Ministry of education, National treasury and university management. The results revealed the need to review and

strengthen policies relating to financial sensitization and internal audit practices in institutions of higher learning. Policymakers should specifically focus on finance awareness, human capital competency, procurement process, project appraisal, technology adoption and internal audit practices.

In terms of practice, study informs the university managers on how best to improve financial performance of public universities. The focus should be on procurement process, technology adoption, human capital competency, project appraisal and financial awareness in that order.

5.5 Suggestions for Further research

This study concentrated on relation between finance sensitization and financial results of public universities, Kenya and moderating effect of internal audit practices. According to the findings, the study variables (finance awareness, human capital competency, procurement process, project appraisal, and technology adoption) accounted for 53.9 percent of financial performance variability. Study recommends that future studies can investigate other factors that can explain the remaining 46.1 percent. Study was limited to public universities, Kenya. The study recommends that future studies can consider investigating financial performance of private universities in Kenya.

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Appendix 1: Research Questionnaire

This questionnaire is intended to collect information on the relationship between financial sensitization, internal audit practices and financial performance of public universities in Kenya. Your institution has been sampled for collection of this important data for the study. You are humbly requested to answer all questions in this data collection tool. The Information collected will be handled with utmost confidentiality and is exclusively intended for this academic study.

PART A: GENERAL INFORMATION

1) Please indicate your gender.

Male

Female

2) What is your highest education level?

Diploma

Bachelor degree

Master

Ph.D.

3) How long have you served in this University?

Less than 1 year

1 – 5 years

6 – 10 years []

Over 10 years []

4) How long have you served in your current position?

Less than 1 year []

1 – 5 years []

6 – 10 years []

Over 10 years []

5) Please indicate your age.

20 - 30 years []

31 - 40 years []

41 - 50 years []

Over 50 years []

SECTION B: FINANCIAL AWARENESS

Indicate in your own opinion the rating of the extent to which the following aspects of financial awareness relate with financial performance of your university. Use the scale of 1 – Strongly Disagree (SD), 2 –Disagree (D), 3 – Neutral (N), 4 –Agree (A), and 5 – Strongly Agree (SA).

No	Statement	Strongly Disagree (SD) 1	Disagree (D) 2	Neutral (N) 3	Agree (A) 4	Strongly Agree (SA) 5
1	Our staff understand the financial risk and its possible consequences on financial performance of the University.					
2	Our staff are conversant with saving culture and its advantages to the university.					
3	Our staff are aware and understand the finance procedures manual guidelines					
4	Our staff know the existence of debt policy and apply it in debt management.					

Explain how else financial awareness influences the financial performance in your university_____

SECTION C: HUMAN CAPITAL COMPETENCY

Indicate in your own opinion the rating of the extent to which the following aspects of Human capital competency relate to financial performance of your university. Use the scale of 1 – Strongly Disagree (SD), 2 –Disagree (D), 3 – Neutral (N), 4 –Agree (A), and 5 – Strongly Agree (SA).

No	Statement	Strongly Disagree (SD) 1	Disagree (D) 2	Neutral (N) 3	Agree (A) 4	Strongly Agree (SA) 5
1	There exist staff training policy and is implemented fully.					
2	Finance Staff possess required professional qualifications					
3	Behaviour culture affects financial practices negatively					
4	Good Interpersonal relations among staff on financial matters exist.					

Explain how else human capital competency influences the financial performance in your university_____

SECTION D: PROCUREMENT PROCESS

Indicate in your own opinion the rating of the extent to which the following aspects of procurement process relate with financial performance of your university. Use the scale of 1 – Strongly Disagree (SD), 2 –Disagree (D), 3 – Neutral (N), 4 –Agree (A), and 5 – Strongly Agree (SA).

No	Statement	Strongly Disagree	Disagree (D)	Neutral (N)	Agree (A)	Strongly Agree
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		(SD) 1	2	3	4	(SA) 5
1	Quality of goods and services purchased are worth the amount paid.					
2	There is inspection and verification of goods and services received devoid of corruption.					
3	Evaluation and awards of tenders is conducted by experts					
4	Management ensures goods and services purchased are worth the amount paid for them.					

Explain how else procurement process influences the financial performance in your university_____

SECTION E: PROJECT APPRAISAL

Indicate in your own opinion the rating of the extent to which the following aspects of project appraisal relate with financial performance of your university. Use the scale of 1 – Strongly Disagree (SD), 2 –Disagree (D), 3 – Neutral (N), 4 –Agree (A), and 5 – Strongly Agree (SA).

No	Statement	Strongly Disagree (SD) 1	Disagree (D) 2	Neutral (N) 3	Agree (A) 4	Strongly Agree (SA) 5

1	Projects to be undertaken are appraised using scientific methods.					
2	Projects are implemented as per schedule in the contract.					
3	Projects are diligently monitored to ensure quality is observed.					
4	There is constant flow of cash to finance projects according to budget.					

Explain how else project appraisal influences the financial performance in your university_____

SECTION F: TECHNOLOGY ADOPTION

Indicate in your own opinion the rating of the extent to which the following aspects of technology adoption relate to financial performance of your university. Use the scale of 1 – Strongly Disagree (SD), 2 –Disagree (D), 3 – Neutral (N), 4 –Agree (A), and 5 – Strongly Agree (SA).

No	Statement	Strongly Disagree (SD) 1	Disagree (D) 2	Neutral (N) 3	Agree (A) 4	Strongly Agree (SA) 5
1	There is adequate IT infrastructure.					
2	Mobile banking is adopted in collection of fees					

3	Staff possess required technological skills.					
4	Internet banking enhances efficiency					

Explain how else technology adoption influences the financial performance in your university_____

SECTION G: INTERNAL AUDIT PRACTICES

Indicate in your own opinion the rating of the extent to which the internal audit practice influence the relationship between financial sensitization and financial performance of your university. Use the scale of 1 – Strongly Disagree (SD), 2 –Disagree (D), 3 – Neutral (N), 4 –Agree (A), and 5 – Strongly Agree (SA).

No	Statement	Strongly Disagree (SD) 1	Disagree (D) 2	Neutral (N) 3	Agree (A) 4	Strongly Agree (SA) 5
1	The frequency of internal audits has an impact on financial performance in the university					
2	The size of the internal audit in terms of staff numbers has an impact on financial performance in the university					
3	The independence of internal auditors has an impact on financial performance in the university					
4	The quality of internal audits has an impact on financial performance in the university					

Explain how else internal audit practices influence the financial performance in public universities_____

SECTION H: FINANCIAL PERFORMANCE

Please rate the following aspects regarding your university. Use the scale of 1 – Strongly Disagree (SD), 2 –Disagree (D), 3 – Neutral (N), 4 –Agree (A), and 5 – Strongly Agree (SA).

No	Statement	(SD) 1	(D) 2	(N) 3	(A) 4	(SA) 5
1	Growth of assets in your University has been on the rise in the last 5 years					
2	The university has been able to meet her daily obligations with ease in the last 5 years					
3	The university has been posting surpluses in the last 5 years					

4	Amount of pending bills in your university has been growing for the last 5 years					
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Appendix 2: Public Universities in Kenya to be part of the study

S/No	Name of University	Year Established
1	University of Nairobi	1970
2	Moi University	1984
3	Kenyatta University	1985
4	Egerton University	1987
5	Jomo Kenyatta University of agriculture and Technology	1994
6	Maseno University	2001
7	Masinde Muliro University of Technology	2007
8	Dedan kimathi University of technology	2012
9	Technical University of Kenya	2013
10	Technical University of Mombasa	2013
11	Meru University of Science and Technology	2013
12	Karatina University	2013
13	Chuka University	2013

14	Pwani University	2013
15	Kisii University	2013
16	Jaramogi Oginga University of Science and Technology	2013
17	Maasai Mara University	2013
18	University of Eldoret	2013
19	University of Kabianga	2013
20	Multimedia University	2013
21	Laikipia University	2013
22	South Eastern Kenya University	2013
23	Kibabii University	2016
24	Muranga University of Technology	2016
25	Kirinyaga University	2016
26	Cooperative university of Kenya	2016
27	Taita Taveta University	2016
28	University of Embu	2016
29	Machakos University	2016
30	Rongo University	2016

Appendix 3: Secondary Data Collection Schedule

	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023
	Kshs	Kshs	Kshs	Kshs	Kshs
Total assets					
Current assets					
Current liabilities					
Pending bills/creditors					
surplus/(deficit)					