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Procurement Process and Financial Performance in Public Universities, Kenya

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Abstract:

The poor financial performance of Kenya's public institutions has resulted in campus closures and an ever-increasing backlog of unpaid debts for a number of years. The academic institutions have encountered difficulties in recruiting sufficient faculty members to meet the demands of the curricula. The study aimed to establish the relationship between the procurement process and the financial performance of Public Universities in Kenya. The study adopted a correlational research design, and the target population was 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 primary data was collected using questionnaires, and secondary data was collected using an Excel schedule and analyzed using descriptive and inferential statistics. The correlation findings indicated that the procurement process had a positive and significant relationship with financial performance ($r = .674, p = .000 < .05$). The R-square value of 0.454 indicates that the procurement process explains 45.4% of variations in the financial performance of public universities. Regression results revealed that the procurement process had a positive and significant influence on financial performance ($\beta = 0.589, p = .000 < .05$), and this implies that the procurement process significantly enhances the financial performance of public universities in Kenya. The study concluded that the procurement process contributes significantly to the enhanced financial performance of public universities. The study recommended that the management of public universities should strengthen aspects relating to the procurement process. There is a need to ensure that the quality of goods and services purchased is up to standard. There should be inspection and verification of goods and services. There is also a need to involve experts in the evaluation and awards of tenders.

Keywords: Procurement process, financial performance, public universities

1. Introduction

The goal of public universities' establishment was to promote the growth and development of the general public (APLU, 2023). They are to educate students with an education that will alter their lives, conduct research to save lives, spur innovation, raise living standards, and empower society to face potential daily obstacles. According to Valero, A. and J. Van Reenen (2018), public universities in Kenya significantly increase economic growth on a local and global level. Graduates from these universities have the skills necessary to support both new and existing business endeavors, identify new job development initiatives, and raise the general standard of living for humans through research, training, and innovation. In the past few years, Kenyan public colleges have underperformed, reporting deficits and rising debt loads. As a result, several institutions have decided to close their campuses in an effort to lessen the financial load on their already thin financial resources.

Total revenue and total expenditure from the financial performance statement were used by Pintea et al. (2014) to measure financial performance. Return on Equity, ROA, and total assets were utilized to assess the financial status. Return on assets (ROA) and Tobin's Q (Q ratio) were the metrics used by Kyere and Ausloos (2019) to gauge financial success. The market value of the company divided by the total value of its assets yields the Q ratio. Net income divided by total assets multiplied by 100 is ROA.

Profitability ratios, which are determined using information from the firm's accessible financial statements, are used by Galant and Cadez (2017) to assess financial performance. Financial performance was evaluated by Kamatra and Kartikaningdyah (2015) using a variety of parameters, including net profit margin, earnings per share, and return on earnings. The degree to which a university fulfills its primary missions of training and research is a key indicator of its success. This can be accomplished only when the necessary infrastructure and human capital are in place. Labs, workshops, and lecture rooms will all be part of the infrastructure. ROA and asset growth are two metrics that can be used to gauge this. The current assets ratio, surplus or deficit in financial performance, and return on assets (ROA) can be used to gauge an organization's capacity to meet day-to-day operations. In the past few years, Kenyan public colleges have

underperformed, reporting deficits and rising debt loads. As a result, several institutions have decided to close their campuses in an effort to lessen the financial load on their already thin financial resources.

Procurement is the buying/ purchasing of commodities and intangibles at a fair price in acceptable quantities and qualities, G. 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 governed by the Public Procurement and Disposal Act and its regulations, the PPRA Act (2015). The 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. Gideon and Graells (2016) recorded that United Kingdom university procurement is governed by the European Union's public procurement rules. The rules are geared to ensure that the embezzlement of funds in the public coffers is reduced, if not eliminated. These depict the importance of proper procurement for good financial performance of government entities. The English universities are obligated to comply with European Union procurement rules, Gideon and Graells, (2016). N.M.N. Osoro (2019) defined procurement as procedures and policies that guide the purchase of all goods and services in a company and can, at times, include leasing and hiring of assets and disposal of disposable items which have become obsolete. Chartered Body of Supply and Procurement (2021) defined the procurement process as the purchase of services and goods that make an organization run profitably and ethically. Profitability is achieved by not incurring unnecessary costs, and ethics are achieved by observing integrity and honesty, among other core values. According to Georgino M et al. (2021), Brum defines the procurement process as interacting and integrating an entity's supply chain to create value for money. The procurement process is key to the university, and through this process, the university can lose large amounts of money through failure to comply with approved procurement laws of the land. Inflated prices and kickbacks in the procurement process may influence the efficiency and effectiveness of controls in the purchase of goods and services.

1.1. Problem Statement

Universities in Kenya are no exception but contribute to the economic growth around the areas where they are situated and beyond through the procurement of goods and services for operations and expansion. Further, students also spur economic growth by consuming from local businesses and going far for their own upkeep while pursuing their education. Public universities in Kenya are over forty in number, including colleges, Commission of University Education (2022), and this sizeable number contribution to our economy cannot be overemphasized due to the benefits of the existence of universities that accrue to the economy. The liquidity challenge in Kenyan Public Universities persists, as per the latest report by the Universities Funding Board (UFB, 2023). According to the report, the universities owe over fifty-six (56) billion to various creditors. This poses a great danger to the sustainability of these Universities. Due to the importance of universities in economic growth, the 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 research on budget compliance, finance planning, investments and monitoring. These had a significant effect on the financial operations of universities. The financial stability of public universities in Kenya has continually weakened (KIPPRA, 2022). This is so despite the fact that the student population has continued to grow from 546,669 in 2021 to 562,066 in the 2022 academic year. Public universities in Kenya continue to perform dismally financially. Jomo Kenyatta University recorded non-remittance of statutory deductions of over 4 billion, an operation loss of over 1.3 billion (auditor report 2021), and a Multimedia University operational loss of over 200 million in the same year. Stalling of projects in these universities has also been raised in the audit report. Considering the research that has been done, some of the causes of poor financial performance have been studied. For example, Kithinji et al. (2023) found out that cash management is key to the success of public university financial performance. This study sought to assess the relationship between the procurement process and financial performance of the Public Universities in Kenya.

1.2. Research Objective

To determine the relationship between the procurement process and the financial performance of the Public Universities in Kenya

1.3. Research Hypothesis

- H0: The procurement process does not have a significant statistical influence on financial performance in public universities in Kenya.

2. Literature Review

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 to enhancing smooth operations and ensuring the achievement of the set goals. It cannot be overemphasized; therefore, these organizations are prone to lose substantial amounts of money if there are ethical and formal structures to check on the procurement processes. Public Universities are expected to offer quality education and use their resources prudently, Meyer and Schwager, (2007). Gideon and Graells (2016) carried out research on when English universities are bound by the 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 the European Union Procurement Act.

Maryam Sobhani et al. (2014), in their research on the level of strategic procurement and performance of manufacturing industries in Iran, measured strategic procurement 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 were that there is a relationship between procurement and financial performance. Further, the relationship was found to be positive. The target population was manufacturing companies in Iran; therefore, the same variables were tested on Public Universities for convergence or otherwise.

Gabriel Awuah et al. (2022) carried out a study on how the procurement process affects procurement performance within tertiary colleges in Ghana. They measured the process by planning, controlling and monitoring. The sample for the study was from the tertiary institutions in Ghana, and respondents filled out 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 training the staff members in public entities on these parameters. The paper was on tertiary colleges, and research on public universities in different geographical regions where cultures differ would be of interest. Still, in Ghana, Gabriel Wilson et al. (2018) researched the examination of procurement in Universities. This was a case of one university in Accra. The procurement measures were compliant with the Procurement Act, as well as transparency, efficiency, and accountability. Primary and secondary data were collected. Primary data was obtained by interviewing the head of procurement, heads of the 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.

Joyce S (2018), in their study on how e-procurement has been implemented and performed in public universities in Kenya, focused on the extent to which e-procurement has been implemented, barriers to the implementation and the effect of procurement performance. The population targeted was 31 Public Universities in Kenya. The findings were that the e-procurement was moderately implemented; the costs, quality and flexibility were affected by e-procurement and there were barriers to implementation due to the costs involved, the capacity of staff and the lack of the necessary infrastructure. This study focused on the financial consequences of e-procurement rather than the entire University. Stella C.C. et al. (2019), in their paper titled Transparency and Procurement Performance in Public Universities in Kenya, focused on procurement performance. The case study was on one University. The objectives were to determine the effect of frequent communication on procurement performance, a meeting between buyer and supplier, and the giving of repeat orders based on procurement performance. All these were found to have a statistically significant relationship with procurement performance.

David O. K & P. Mwangangi (2017) recommended 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 and procurement performance in public universities in Kenya. The target population was the user departments in the public universities, where a sample of 525 members of staff was selected, and the data was collected and analyzed for the findings. Relationships between buyers and suppliers and quality awareness were found to be positively related to the financial performance of the Public Universities. Leah. 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. A review was carried out on these institutions, and the data was collected from researchers from the same institutions. The findings listed a number of barriers: costs, the availability of goods and services to be supplied, the attitude of management, the evaluation criteria, the lack of knowledge, and stakeholders with diverse opinions. A check on whether these barriers hold in Public Universities would enhance informed decision-making. Georgino M et al. (2021) reviewed the literature on the 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. Such relationships would be tested in public universities in Kenya to determine their inclinations.

3. Methodology

3.1. Research Design

Sileyew (2020) defined research design as the framework that would best guide a research study to yield the 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 impacts the quality of findings and conclusions of the particular study. This research was carried out using a correlational approach, whereby a multiple regression analysis was conducted. The central measures of tendency were also used. The multiple regression analysis assisted in the determination of relationships between the independent and dependent variables.

3.2. Target Population

The target population was public universities in Kenya. These were 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 were represented by the University of Nairobi, Kenyatta University and Jomo Kenyatta University of Agriculture and Technology. 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. The third and final category is public universities established in 2016, which were represented by Co-operative University, Kirinyaga University, Embu University, and Machakos University. Considering that the universities have a common major source of financing from the Kenya Government on the same terms and are subject to the same regulatory

framework, the selected universities represented true and fair reflections of the reality on the ground. Therefore, the universities selected were randomly selected in each category as they share the same characteristics in terms of age and size, population and finances.

3.3. Sample Size

Purposive sampling was used to ensure that the data collected was of high quality. Thirty (30) universities were targeted for the study. These are classified using the 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, which are 15 in number. The third category was universities established in 2016, which are eight (8) in number. Using Yamane's (1967) formula with a standard error of 5%, we get a sample of 155.

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

The Period of University 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

Table 1: Sample Size

3.4. Data Collection Instruments

The collection of data instruments enables the researcher to collect data for the intended study. Canals (2017) asserted that the methods of data collection employed largely depend on the research questions and objectives of the study. The data collection was administered using a questionnaire given to respondents. To ensure quality information, three sets of questionnaires were used:

- First, for the human resource department,
- Second, for the finance department and
- Third, for the procurement department.

3.5. 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. Therefore, the data was worked on to ensure that conclusions made were devoid of ambiguity and meaning. SPSS software was used to convert the data and compute the statistical inferences as required. The regression model was used to test the relationships between the independent and dependent variables.

4. Results and Discussion

4.1. Descriptive Analysis

4.1.1. Procurement Process

The respondents were asked to state their level of agreement with statements measuring the procurement process, and the results are presented in table 2. The results are presented in percentages, means and standard deviations. The following scale was used: strongly disagree (1), disagree (2), neutral (3), agree (4), and strongly agree (5).

Statement	SD	D	N	A	SA	Mean	Std. Dev
The 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 are conducted by experts	0.0%	6.2%	16.8%	50.4%	26.5%	3.97	0.83
Management ensures that 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
Aggregate score						3.96	0.88

Table 2: Descriptive Results on Procurement Process

Results indicate that majority of respondents agreed 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 the procurement process is essential in enhancing the financial performance of the university. According to Gabriel Awuah et al. (2022), the procurement process is measured by planning, monitoring and controlling, which affects firm performance.

The respondents were further asked to explain how other procurement processes influence the financial performance of the university. According to the findings, procurement enhances transparency and accountability, enhances timeliness in the delivery of goods, reduces costs, and enhances timely payments to suppliers. The results imply that the procurement process plays a critical role in enhancing financial performance.

4.1.2. Financial Performance of Public Universities in Kenya

The respondents were asked to state their level of agreement with statements measuring financial performance, and the results are presented in table 3. The results are presented in percentages, means and standard deviations. The following scale was used: Strongly disagree (1), disagree (2), neutral (3), agree (4), and strongly agree (5).

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
Aggregate score						2.85	1.18

Table 3: Descriptive Results on Financial Performance

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

4.2. Correlation Analysis

The study used correlation analysis results to test the null hypothesis (H_0): The procurement process has no significant statistical influence on the financial performance of public Universities in Kenya. The findings are shown in table 4.

		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).			

Table 4: Correlation between Procurement Process and Financial Performance

The findings indicate that the procurement process had a positive and significant relationship with financial performance ($r = .674, p = .000 < .05$). This implies that a change in the procurement process is associated with a significant change in the financial performance of public universities in a similar direction. From the findings, the null hypothesis was rejected, denoting that the procurement process has a significant statistical influence on the financial performance of public Universities in Kenya. The findings mirror those of Maryam Sobhani et al. (2014), who found a relationship between procurement and financial performance. Joyce (2018) established that the procurement process significantly influences firm performance. Georgino et al.'s (2021) findings were that the procurement process was directly and positively related to financial performance.

4.3. Regression Analysis

A linear regression was conducted to investigate the influence of the procurement process on the financial performance of Public Universities in Kenya. Table 5 indicates the model summary results.

Model	R	R-Square	Adjusted R-Square	Std. Error of the Estimate
1	.674a	0.454	0.449	0.48359
a Predictors: (Constant), Procurement process				

Table 5: Model Summary: Procurement Process and Financial Performance

The table presents R-square values for the extent of variation. The R-square value of 0.454 indicates that the procurement process explains 45.4% of variations in public universities' financial performance. The remaining 54.6% could be attributed to other factors not included in this study model.

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			
a Dependent Variable: Financial performance						
b Predictors: (Constant), Procurement process						

Table 6: ANOVA: Procurement Process and Financial Performance

The results indicate an F-statistic of 92.405 and a p-value of 0.000 less than .05. This implies that the study model was statistically significant (excellent fit) in predicting the outcome variable. Therefore, the procurement process is a satisfactory influencer of financial performance.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.519	0.247		2.106	0.037
	Procurement process	0.589	0.061	0.674	9.613	0.000
a Dependent Variable: Financial performance						

Table 7: Regression Coefficients: Procurement Process and Financial Performance

Findings in table 7 show that the procurement process had a positive and significant influence on financial performance ($\beta = 0.589$, $p=.000<.05$), which implies that the procurement process significantly enhances the financial performance of public universities in Kenya. Results mirror those of Georgino et al. (2021), who found that the procurement process was directly and positively related to financial performance.

5. Conclusion

The study concluded that the procurement process had a positive and significant relationship with financial performance. The implication is that the procurement process contributes significantly to the enhanced financial performance of public universities. Notably, the 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 are conducted by experts, and management ensures goods and services purchased are worth the amount paid for them. The null hypothesis that the procurement process has no significant statistical influence on the financial performance of public Universities in Kenya was rejected.

6. Recommendations

The study findings demonstrated that the procurement process had a positive and significant relationship with financial performance. The study recommended that the management of public universities strengthen aspects relating to the procurement process. The quality of goods and services purchased must be ensured. Goods and services should be inspected and verified. Experts should also be involved in the evaluation and award of tenders.

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