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ABSTRACT

The purpose of this study was to establish the effect cash management practices on the operational performance of public universities in Kenya. The study specifically looked at the effect of accounts payable management, accounts receivable management, inventory management, and short-term borrowing on operational performance of public universities in Kenya. The study adopted the transaction cost theory, agency theory, economic order quantity model and pecking order theory. This study used a descriptive survey research design. Population of the study was 100 employees comprising of university heads of finance departments, accountants, and registrars. The study used census survey. A pilot study was conducted to test for validity and reliability of the research instruments. Content validity was used as validity test while reliability was tested using Cronbach's alpha coefficient. Descriptive statistics including mean, percentages and frequencies was used while inferential statistics that is multiple regression model and product moment correlation was used to make inferences of the population using data drawn from the population. The study results revealed that there was a significant relationship between accounts payable management and operational performance of public universities (β=0.182, p≤0.05); there was a significant relationship between accounts receivable management and operational performance of public universities (β=0.272, p≤0.05); there was a significant relationship between inventory management and operational performance of public universities (β=0.229, p≤0.05) and that there was a significant relationship between short-term borrowing and operational performance of public universities (β=0.216, p≤0.05). The study is important as it lead to effective cash management which increase employment and economic growth. The investors, government, employees and the researchers benefits from this research because it gives insight on investment planning practices used in achieving the cash flow management of public universities.

Key Words: *accounts payable, accounts receivable, inventory management, short-term borrowing*

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INTRODUCTION

Learning institutions undertake several activities which involve procurement, payment and collection of fees. Operational performance is important for entities and organizations as it forms the task-oriented framework of the organization (Marginson, 2020). Operational performance is measured against a standard or prescribed indicator of effectiveness, efficiency, and environmental responsibility such as cycle time, productivity, waste reduction and regulatory compliance. The objectives of operational performance are the areas of operational performance that a firm tries to improve, in a bid to meet its corporate strategy. Operational performance objectives are: cost, quality, speed, flexibility, and dependability (Barr & Turner, 2023).

Accounts payable management refers to the strategic handling of an institution's obligations to its creditors, ensuring timely payment of outstanding debts while maintaining sufficient cash flow for daily operations. Effective accounts payable management is crucial for operational efficiency, as delayed payments can damage supplier relationships and attract penalties, whereas premature payments can strain liquidity (Mutua & Njihia, 2022). In public universities, managing accounts payable involves aligning payment schedules with cash inflows, negotiating favorable credit terms, and maintaining accurate records to enhance financial accountability (Otieno & Wanyoike, 2023). With the increasing operational costs in higher education, universities must optimize their accounts payable cycles to preserve cash reserves and avoid financial distress. Strategic management of accounts payable contributes to better budgeting, improved supplier confidence, and overall institutional sustainability. In a context of limited and delayed government funding in Kenya, strong accounts payable practices are essential to ensure that public universities can continue to deliver quality education services (Ochieng & Kimani, 2023).

Accounts receivable management entails the processes through which institutions monitor, collect, and control outstanding payments from students, donors, or external partners to maintain adequate cash flow (Mwangi & Maina, 2022). Efficient management of receivables ensures that universities minimize bad debts and optimize their liquidity position, which is critical for funding operational activities such as paying salaries, maintaining infrastructure, and procuring learning materials (Kiprop & Chepkwony, 2023). In the Kenyan public university context, delayed or defaulted student fee payments have become a major financial risk, compelling universities to adopt structured credit policies, proactive collection procedures, and incentives for timely payment (Odhiambo & Onyango, 2022). A weak receivables management system can lead to cash shortages that disrupt service delivery and diminish institutional credibility. Strengthening accounts receivable management thus supports operational sustainability by improving cash inflows, reducing the need for short-term borrowing, and enhancing planning and financial forecasting (Mutua & Njihia, 2022).

Inventory management involves the planning, ordering, storing, and controlling of an institution's supplies, materials, and equipment required for its operations. In universities, this includes academic resources such as laboratory supplies, library books, office equipment, and maintenance tools (Otieno & Wanyoike, 2023). Effective inventory management ensures that institutions have sufficient resources available without incurring excessive holding costs or facing stockouts that disrupt academic activities (Mwangi & Maina, 2022). Poor inventory control can lead to wastage, theft, and unnecessary expenditure, all of which negatively impact operational performance. In public universities where funding is constrained, adopting modern inventory management systems such as automated tracking, just-in-time procurement, and periodic audits improves efficiency and resource utilization (Kiprop & Chepkwony, 2023). Recent studies

highlight that universities that have adopted integrated inventory management approaches achieve better cost control and operational dependability, ultimately enhancing their institutional sustainability and service delivery (Odhiambo & Onyango, 2022).

Short-term borrowing refers to the practice of securing funds that must be repaid within a year, often used to bridge temporary cash flow gaps and finance immediate operational needs (Mutua & Njihia, 2022). For public universities, short-term borrowing can provide critical liquidity during periods of delayed government funding or low fee collection. However, reliance on short-term loans carries financial risks, including interest obligations and the potential for debt accumulation if not managed prudently (Kiprop & Chepkwony, 2023). Effective management of short-term borrowing involves aligning debt maturity with anticipated cash inflows, negotiating favorable lending terms, and ensuring borrowing is used for revenue-generating or cost-saving activities (Otieno & Wanyoike, 2023). In Kenya, financial constraints have pushed universities toward increased borrowing, but without robust cash flow management, this can exacerbate financial instability (Ochieng & Kimani, 2023). Thus, strategic use of short-term borrowing supports operational continuity while minimizing long-term financial risks and promoting sustainable institutional growth (Mwangi & Maina, 2022).

Public universities in the United States face increasing financial pressures from declining state funding, rising operational costs, and shifting enrollment trends. As a result, cash management practices such as detailed cash flow forecasting, liquidity optimization, and strategic investment of reserves have become critical (Johnstone & Marcucci, 2021). Many institutions have diversified revenue streams through endowments, research grants, alumni donations, and partnerships with private industries, enhancing their financial resilience (Barr & Turner, 2023). Universities like the University of California system utilize real-time financial dashboards to monitor cash positions and adjust spending patterns accordingly. Despite these efforts, challenges remain, particularly for smaller public universities that lack large endowments, leading to greater vulnerability during economic downturns (Altbach et al., 2022). Effective cash management thus plays a vital role in maintaining operational performance, funding critical programs, and ensuring the long-term sustainability of U.S. public higher education institutions.

In Africa, public universities face significant financial challenges due to over-reliance on government funding, inefficient financial management systems, and fluctuating economic conditions (World Bank, 2022). Many universities in countries such as Nigeria, South Africa, and Ghana struggle with cash flow constraints, which impact service delivery, staff remuneration, and infrastructural development (Akinyemi, 2021). Despite efforts to implement better financial controls, inadequate financial reporting, misallocation of resources, and liquidity challenges persist in many institutions (Owolabi & Olayemi, 2020). The rise in student enrollment across Africa has further strained university budgets, making efficient cash management practices more crucial than ever (Teferra, 2021). Studies indicate that universities that have adopted modern cash management techniques, including financial forecasting and internal auditing, have experienced improved operational performance and financial sustainability (Mohamedbhai, 2022).

Public universities in Kenya face significant financial pressures due to declining government capitation, increased operational costs, and growing student enrollment (Commission for University Education [CUE], 2023). The introduction of the differentiated unit cost (DUC) funding model was aimed at improving financial efficiency; however, universities continue to struggle with cash flow management, leading to budget deficits, salary delays, and stalled infrastructure projects (Ng'ang'a & Koskei, 2022). Inefficiencies in budgeting and financial reporting have further compounded these challenges,

affecting the quality of education and service delivery (Odhiambo, 2021). While some universities have attempted to generate alternative revenue streams through commercial ventures and partnerships, the lack of strategic financial planning has hindered their effectiveness (Wekesa & Kinyanjui, 2020). The financial mismanagement and misappropriation of funds in some public universities have also raised concerns about accountability and governance in higher education (Mwangi et al., 2023).

At the institutional level, public universities in different regions of Kenya experience varying degrees of financial stability based on their financial management practices and external funding sources. Universities have had financial crises attributed to poor cash flow forecasting and mismanagement of internally generated funds (Kipkemboi & Muturi, 2021). The impact of these financial challenges has been felt through reduced staff morale, incomplete projects, and compromised learning environments (Njoroge & Wainaina, 2022). Internal control weaknesses, including ineffective audit processes and procurement irregularities, have further exacerbated financial mismanagement (Kariuki, 2020). Despite these challenges, some universities have implemented innovative financial strategies, such as automated budgeting systems and performance-based financing, to improve their cash management practices (Ochieng & Kimani, 2023). However, the extent to which these practices influence operational performance remains under-researched, necessitating an in-depth analysis of their effectiveness.

Statement of the Problem

Public universities in Kenya are facing severe financial distress, leading to operational inefficiencies that threaten their sustainability and service delivery (CUE, 2023). The persistent cash flow constraints have resulted in challenges such as delayed staff salaries, inadequate infrastructure development, and the inability to procure essential learning materials (Ng'ang'a & Koskei, 2022). While the government provides funding through capitation, the delayed disbursement of funds and mismanagement of resources have exacerbated financial struggles, affecting the overall operational performance of these institutions (Mwangi et al., 2023).

Despite the critical role that cash management practices play in ensuring financial sustainability, many public universities in Kenya lack effective mechanisms for budgeting, cash flow forecasting, liquidity management, and financial accountability (Odhiambo, 2021). Poor financial reporting and weak internal controls have led to cases of misappropriation of funds and increased operational inefficiencies (Wekesa & Kinyanjui, 2020). Additionally, the over-reliance on government funding, coupled with low revenue diversification, has further strained university finances, limiting their ability to sustain quality education and research (Teferra, 2021).

Although some universities have implemented measures such as automated financial management systems and internal audits, there is limited empirical evidence on their effectiveness in improving operational performance (Ochieng & Kimani, 2023). This study, therefore examined the effect of cash management practices on the operational performance of public universities in Kenya, providing insights into how improved financial strategies can enhance institutional sustainability.

Objectives of the Study

The general objectives of the study was to assess the effect cash management practices on the operational performance of public universities in Kenya. The study was guided by the following specific objectives

- To examine the effect of accounts payable management on the operational performance of public universities in Kenya.
- To investigate the effect of accounts receivable management on the operational

performance of public universities in Kenya.

- To assess the effect of inventory management practices on the operational performance of public universities in Kenya.
- To analyze the influence of short-term borrowing on the operational performance of public universities in Kenya.

LITERATURE REVIEW

Theoretical Review

Transaction Cost Theory

The Transaction Cost Theory, proposed by Ronald Coase (1937) and later expanded by Oliver Williamson (1985), explains how firms manage their economic exchanges to minimize transaction costs. According to this theory, organizations aim to reduce costs associated with negotiating, monitoring, and enforcing agreements (Williamson, 2020). In the context of accounts payable management, the theory suggests that firms develop payment strategies and supplier relationships that lower the overall transaction and operational costs. Proper management of accounts payable, such as negotiating favorable credit terms and timely payments, is viewed as a strategy to maintain supplier goodwill while reducing administrative and financial overhead (Lambert, 2022). By treating suppliers as strategic partners rather than adversaries, organizations can achieve more predictable cash flows and enhanced financial performance. Transaction Cost Theory thus offers a valuable lens for understanding why and how firms structure their payables processes to balance liquidity needs and operational efficiency.

Agency Theory

The Agency Theory, proposed by Jensen and Meckling (1976), examines the relationship between principals (owners) and agents (managers) and the conflicts that arise from differing goals (Jensen & Meckling, 1976). It suggests that agents may not always act in the best interests of principals unless properly incentivized or monitored (Eisenhardt, 2020). In accounts receivable management, this theory highlights the risk that managers might prioritize short-term revenue collection targets or lax credit policies that could compromise long-term financial stability. Effective receivables management systems, therefore, are necessary to align agent behavior with the organization's financial goals. By setting clear policies on credit evaluation, collection procedures, and risk management, institutions can ensure that accounts receivable practices contribute to healthy cash flows and operational performance (Fama & Jensen, 2021).

Economic Order Quantity (EOQ) Model

The Economic Order Quantity (EOQ) Model, developed by Ford W. Harris in 1913 and later refined by R. H. Wilson, is one of the foundational theories in inventory management (Harris, 1913; Wilson, 2021). The EOQ model proposes that organizations can minimize the total costs associated with ordering and holding inventory by determining an optimal order quantity (Sanders, 2022). It balances two key cost components: ordering costs (incurred each time inventory is replenished) and holding costs (costs of storing unsold goods). In the context of inventory management at public universities, the EOQ model provides a framework to manage educational materials, supplies, and assets efficiently. By ordering neither too frequently (raising order costs) nor in excessive amounts (raising holding costs), institutions can ensure the availability of critical resources while maintaining cost control. Thus, the EOQ model underpins strategic decision-making on inventory purchases and storage policies.

Pecking Order Theory

The Pecking Order Theory, introduced by Donaldson (1961) and later formalized by Myers and Majluf (1984), explains financing preferences, particularly in the context of short-term borrowing (Myers & Majluf, 1984). The theory posits that firms prioritize internal financing (retained earnings) first, then debt, and only resort to issuing new equity as a last option (Frank & Goyal, 2022). In terms of short-term borrowing, the theory suggests that

organizations prefer debt instruments such as short-term loans to finance operational needs rather than diluting ownership or issuing long-term bonds when internal funds are insufficient. This financing hierarchy minimizes the costs associated with information asymmetry between insiders and external investors. In public universities, short-term borrowing may be preferred to quickly address cash flow gaps without committing to long-term debt obligations, preserving flexibility and maintaining operational continuity.

Empirical Review

Madzík and Madzík (2022) examined the impact of accounts payable management on operational performance among manufacturing firms in Slovakia. Their study revealed that firms that optimized payment periods to suppliers without straining relationships achieved higher operational efficiency and cost reduction. Using a quantitative survey of 250 firms, the study found that longer payment periods improved cash availability, enhancing procurement processes and operational stability. However, the researchers cautioned that excessively delaying payments could damage supplier relationships, affecting the reliability of supply chains. The study emphasized the need for strategic negotiation of payment terms to maintain both liquidity and supplier goodwill.

Akinyele et al. (2022) studied the relationship between accounts receivable management and operational performance in Nigerian retail firms. They found that effective management of accounts receivable, including timely collection and credit risk management, directly improved the firms' liquidity and operational performance. The research emphasized that slow receivables hindered cash flow, impacting the firms' ability to meet their operational costs. The study suggested adopting automated credit management systems to streamline collections and improve financial planning. Moreover, firms with better accounts receivable turnover ratios experienced enhanced operational efficiency, particularly in terms of inventory management and procurement.

A recent study by Tan and Lee (2022) investigated the role of inventory management in operational performance within the retail sector in Singapore. The study found that effective inventory control, including real-time tracking and demand forecasting, significantly enhanced operational efficiency. Firms with optimized inventory management were able to reduce stockouts, minimize excess inventory, and improve cash flow, leading to a better overall performance. The researchers emphasized that firms should adopt technology-driven inventory systems to improve forecasting accuracy and enhance stock visibility across the supply chain.

A study by Garcia et al. (2022) investigated the role of short-term borrowing in operational performance within small and medium-sized enterprises (SMEs) in Europe. The study revealed that firms using short-term loans to manage cash flow challenges experienced enhanced operational efficiency, as these loans allowed for timely purchase of inventory and smooth operational activities. However, the researchers also emphasized that excessive reliance on short-term borrowing led to increased financial costs, reducing profitability in the long term. The study recommended a balanced approach, suggesting that SMEs monitor their borrowing closely to avoid cash flow mismatches and negative effects on operational performance.

Conceptual Framework

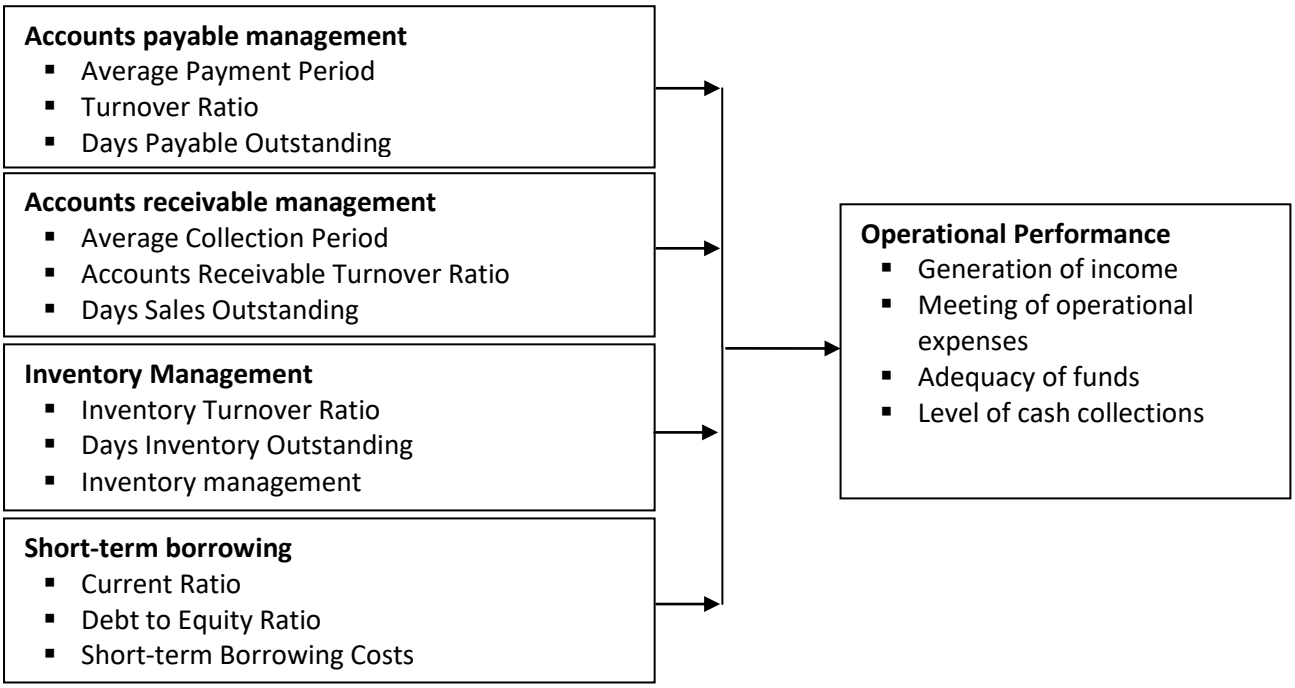

Figure 1: Conceptual Framework

METHODOLOGY

This study adopted a descriptive survey design, which allows for a detailed examination of cash management practices and their effect on the operational performance of public universities in Kenya. For this study, the target population consists of staff working in financial management positions at public universities in Uasin Gishu County, Kenya. This includes university heads of finance departments, accountants, and registrars. According to the Ministry of Education (2024), there are five public universities in Uasin Gishu County, each with finance staff. The total target population for the study is 100 individuals. Since the target population was relatively small, the study employed a census survey method, which involves collecting data from every member of the population. The sampling frame included a list of all the financial management staff from the public universities in Uasin Gishu County.

The study utilized semi-structured questionnaires as the primary data collection tool. A pilot study was conducted in a similar setting, specifically at public universities in Nakuru County, to test the validity and reliability of the research instruments. According to Kothari (2004), a pilot study helps to identify potential issues in the data collection tools before the actual study is conducted. The pilot study involved at least 10% of the target population (approximately 10 respondents), and the feedback was used to make necessary adjustments to the questionnaires, ensuring their effectiveness in gathering valid and reliable data.

Data collected underwent cleaning to remove any inconsistencies or errors before analysis. The data was then coded and entered into SPSS Version 23.0 for analysis. Descriptive statistics such as frequencies, percentages, means, and standard deviations were used to summarize the data, while inferential statistics, including regression analysis, were employed to determine the relationships between the independent variables (cash management practices) and the dependent variable (operational performance). The regression model is specified as:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \acute{\varepsilon}$$

Where:

Y represents cash flow management.
α is the constant.
β1, β2, β3, β4 are the coefficients of the independent variables.
X1 represents accounts payable management.
X2 represents accounts receivable management.
X3 represents inventory management.
X4 represents short-term borrowing.
ε represents the error term.

The findings were presented in tables and figures.

FINDINGS AND DISCUSSION

Response Rate

The study targeted university heads of finance departments, accountants, and registrars. The study sampled 100 respondents and managed to collect data from 96 respondents. This represented 96.0 per cent response rate. This was affirmed by Saleh and Bista (2017) who noted that a response rate of more than 75% is appropriate for data analysis.

Descriptive Findings and Discussions

Descriptive statistics are used to describe the basic features of the data in the study. They provide simple summaries about the sample and measures. Together with simple graphic analysis they form the basis of virtually every quantitative analysis of data (Kothari, 2014). This section represents the results of the study in form of tables and it also presents the descriptive analysis based on each variable. The respondent were asked to indicate whether they agree or disagree on the statement based on a likert scale of 1 to 5 where 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree. The statistics used were minimum, maximum, mean and standard deviation.

Accounts payable management and Operational performance

The study sought to establish the effect of accounts payable management on operational performance of Public universities in Uasin Gishu County. The study findings were as presented in Table 1.

Table 1: Accounts payable management and Operational performance

Statements		SA	A	U	D	SD	Mean	StdDev
Payment to suppliers is made on time.	F	27	42	13	9	5	3.80	1.047
	%	27.7	43.1	15	9.2	5		
The university negotiates favorable payment terms.	F	30	38	9	14	5	3.79	1.074
	%	30.8	40	9.8	14.4	5		
Clear payable schedules exist and are followed.	F	21	59	15	1	0	4.04	0.342
	%	21.5	61.5	15.5	1.5	0		
Delays in accounts payable negatively affect operations.	F	40	27	18	7	4	3.93	0.346
	%	40	27	18	7	4		

The study findings revealed 69 (70.7%) of the respondents agreed that payment to suppliers is made on time (Mean=3.80, SD=1.047) as compared to 14 (13.6%) who disagreed. The study also indicated that 68 (69.8%) agreed that the university negotiates favorable payment terms (Mean=3.79, SD=1.074) as compared to 19 (19.4%) who disagreed. In addition, the study findings revealed that 70 (83.0%) of the respondents agreed that clear payable schedules exist and are followed (Mean=4.04; SD=0.342) as compared to 1 (1.5%) who disagreed. Moreover, the study results revealed that 67 (69.8%) of the respondents agreed that delays in accounts payable negatively affect operations (Mean=3.93; SD=0.346) whereas 11 (13.3%) were in disagreement.

The study results in Table 1 revealed that the majority of the respondents were of the view that clear payable schedules exist and are followed. These findings were supported by Mwangi and Wanjiru (2022), who observed that timely and structured accounts payable processes enhance supplier relationships and organizational financial efficiency.

Accounts Receivable Management and Operational performance

The study sought to determine the effect of accounts receivable management on operational performance of Public universities in Uasin Gishu County. The study responses were as in Table 2.

Table 2: Accounts Receivable Management and Operational performance

Statements		SA	A	U	D	SD	Mean	Std Dev
The university has efficient systems for collecting receivables.	F	61	25	10	0	0	4.52	1.196
	%	63.1	26.2	10.7	0	0		
Receivables are collected within the set time frame.	F	61	24	11	0	0	4.51	0.275
	%	63.1	25.2	11.7	0	0		
Delayed receivables affect service delivery.	F	59	28	9	0	0	4.48	0.450
	%	61	29.2	9.8	0	0		
There is proper documentation for all receivables.	F	38	44	10	3	0	4.28	0.273
	%	40	46.2	10.9	3.1	0		

The study results on the effect of accounts receivable management on operational performance of public universities indicated that 86 (89.3%) of the respondents agreed that the university has efficient systems for collecting receivables (Mean=4.52; SD=1.115). None of the respondents disagreed with the statement. The study findings also revealed that 85 (88.3%) agreed that receivables are collected within the set time frame (Mean=4.51; SD=0.275) as compared none who disagreed. The study results indicated that 87 (89.2%) agreed that delayed receivables affect service delivery (Mean=4.48; SD=0.450) while none of them disagreed. Lastly, the study findings showed that 82 (89.4%) of the respondents agreed that there is proper documentation for all receivables (Mean=4.28; SD=0.273) as compared 3 (3.1%) who disagreed.

The study findings in Table 2 indicated that the majority of the respondents were of the view that the university has efficient systems for collecting receivables. These findings are in agreement with those of Njeru and Mungai (2021), who established that institutions of higher learning in Kenya that adopted robust receivables management systems experienced improved financial liquidity and reduced levels of bad debts. Their study emphasized the importance of timely invoicing, automated reminders, and regular account reconciliations in ensuring efficient collection of receivables. This suggests that proper receivables systems are critical to enhancing financial sustainability and operational efficiency in universities.

Inventory Management and Operational Performance

The study sought to examine the effect of inventory management on operational performance of public universities in Uasin Gishu County. The study results were as shown in Table 3.

Table 3: Inventory Management and Operational Performance

Statements		SA	A	U	D	SD	Mean	StdDev
The university maintains optimal stock levels.	F	27	41	15	8	5	4.00	1.187
	%	28.1	42.4	15.9	8.6	5		
Stock control systems are automated.	F	8	58	15	12	4	3.55	0.969
	%	7.9	60.4	15.2	12.2	4.3		
Inventory losses are minimal due to controls in place.	F	58	7	14	13	5	3.55	0.764
	%	60.4	6.9	14.2	13.2	5.3		
Regular inventory audits are conducted.	F	10	48	19	16	2	3.16	0.606
	%	10.8	50.4	20.1	16.5	2.2		

The study results on the effect of inventory management on operational performance of Public universities revealed that 68 (70.5%) of the respondents agreed that that the university maintains optimal stock levels (Mean=4.00; SD=1.187) while 13 (13.6%) were in disagreement. The study also revealed that 66 (68.3%) agreed that that stock control systems are automated (Mean=3.55; SD=0.969) while 16 (16.5%) were in disagreement. The study also revealed that 65 (67.3%) agreed that inventory losses are minimal due to controls in place (Mean=3.55; SD=0.764) while 18 (18.5%) disagreed. Furthermore, the study showed 58 (61.2%) of the respondents agreed that regular inventory audits are conducted (Mean=3.12; SD=0.606) while 18 (18.7%) disagreed.

The study results revealed that the majority of the respondents were of the view that the university maintains optimal stock levels. These results were in agreement with findings by Otieno and Githinji (2022), who reported that institutions that implemented effective inventory control systems were more likely to maintain optimal stock levels, thus reducing incidences of stockouts and overstocking. Their study emphasized that maintaining the right inventory balance enhances service delivery and supports smooth operational workflows in academic institutions.

Short-Term Borrowing and Operational Performance

The study sought to determine the effect of short-term borrowing and operational performance of public universities in Uasin Gishu County. The study results were as tabulated in Table 4.

Table 4: Short-Term Borrowing and Operational Performance

Statements		SA	A	U	D	SD	Mean	Std Dev
The university uses overdraft facilities to meet urgent cash needs.	F	27	41	14	9	5	3.80	1.047
	%	27.7	43.1	15	9.2	5		
Short-term borrowing helps bridge cash flow gaps and is managed within budget limits.	F	30	38	9	14	5	3.79	1.074
	%	30.8	40	9.8	14.4	5		
Interest on short-term loans is sustainable.	F	21	59	15	1	0	4.04	0.342
	%	21.5	61.5	15.5	1.5	0		

The study findings revealed that 68 (70.5%) of the respondents agreed that the university uses overdraft facilities to meet urgent cash needs (Mean=3.80; SD=1.047) while 14 (14.2%) disagreed. The study findings also revealed that 68 (70.8.8%) of the respondents agreed that short-term borrowing helps bridge cash flow gaps and is managed within budget limits (Mean=3.79; SD=1.074) while 19 (19.4%) were in disagreement. The study results also showed that 70 (83.0%) of the respondents agreed that interest on short-term loans is sustainable (Mean=4.04; SD=0.342) as compared to 1 (1.5%).

The study results revealed that the majority of the respondents were of the view that interest on short-term loans is sustainable. These results are in consonance with findings by Muturi and Waweru (2021), who observed that institutions with structured financial management practices often consider short-term borrowing as a manageable and strategic financing option. Their study noted that sustainable interest rates on short-term loans enhance liquidity without exerting excessive pressure on institutional finances, thereby supporting smooth operational continuity.

Operational Performance of Public universities

The study finally sought to determine the indicators of operational performance of public universities in Uasin Gishu County. The study results were as tabulated in Table 5.

Table 5: Operational Performance of Public universities

Statements		SA	A	U	D	SD	Mean	Std Dev
The university meets its financial obligations on time.	F	44	43	7	5	0	4.52	0.764
	%	45.1	44.2	7.2	5.1	0		
There is improved service delivery due to proper cash management.	F	42	45	9	3	0	4.49	0.606
	%	43.1	46.2	9.2	3.1	0		
Budget execution is timely, efficient, financial reports are prepared promptly accurately.	F	53	33	12	0	0	4.52	1.446
	%	53.8	33.8	12.3	0	0		

The study results on indicators of operational performance revealed that 87 (89.3%) of the respondents agreed that the university meets its financial obligations on time (Mean=4.52; SD=4.52) as compared to 5 (5.1%) who disagreed; 87 (89.4%) also agreed that there is improved service delivery due to proper cash management (Mean=4.49, SD=0.606) as compared to 3 (3.1%) who disagreed. Lastly, the study revealed that 86 (87.6%) of the respondents agreed that budget execution is timely, efficient, and financial reports are prepared promptly and accurately (Mean=4.52; SD=1.446) as compared to none who disagreed.

Inferential Statistics

Pearson correlation analysis was used to test the association between the study variables. Pearson correlation was used to measure the extent of correlation between variables of the study and to show the strength of the linear relationship between variables in the correlation ranges between +1 and – 1, where r >0.7 indicates a strong positive relationship, r=+0.5 and below 0.7 indicates a moderate relationship and where r =+0.49 and below indicates a weak relationship between study variables. Where r=0 indicates that there is no relationship. The study findings were as tabulated in Table 6.

Table 6: Relationship between Study Variables

		Accounts payable management	Accounts receivable management	Inventory management	Short-term borrowing
Accounts payable management	Pearson Correlation	1			
	Sig. (2-tailed)				
Accounts receivable management	Pearson Correlation	.580**	1		
	Sig. (2-tailed)	0.000			
Inventory management	Pearson Correlation	0.407	0.104	1	
	Sig. (2-tailed)	0.642	0.306		
Short-term borrowing	Pearson Correlation	.697	.853	.533	1
	Sig. (2-tailed)	0.200	0.190	0.302	
Operational performance	Pearson Correlation	.622**	.631**	.411**	.597**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000
	N	96	96	96	96

**. Correlation is significant at the 0.01

The study findings indicated that there was a statistical significant positive correlation between accounts payable management on operational performance of Public universities (r=0.622, p<0.05). This implies that a unit change in accounts payable management leads to 62.2% change in operational performance of Public universities. When accounts payable management are positive, operational performance is also positive.

The relationship between accounts receivable management and operational performance was analyzed and the study findings indicated that there was a statistical significant positive effect of accounts receivable management on operational performance (r=0.631; p<0.05). This showed that a unit change in accounts receivable management leads to 63.1% change in operational performance. When accounts receivable management are positive, operational performance is also positive.

The study findings indicated that there was a statistical significant positive effect of inventory management on operational performance of public universities (r=0.411; p<0.05). This implies that a unit change in inventory management leads to a 41.1% change in operational performance of public universities. When inventory management are positive, operational performance is also positive.

The study findings indicated that there was a statistical significant positive effect of short-term borrowing on operational performance of Public universities (r=0.597; p<0.05). This implies that a unit change in short-term borrowing leads to 59.7% change in operational performance of Public universities. When short-term borrowing are positive, operational performance is also positive.

Multiple Regression Model Analysis

The study performed multiple regression model analysis to estimate the relationships between the study variables. The study results were as tabulated in Table 7.

Table 7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	.802[a]	0.845	0.879	0.0879	112.668	0.000[b]

The model indicated the simple correlation was 0.802 which indicates a degree of correlation. The total variation (the adjusted R^2 of the study model is 0.845 with the R^2 = 0.879) in operational performance was 87.9% explained by cash management practices (R Square=0.879, Standard Error=0.068). This means that the linear regression explains 80.2% of the variance in the data. This implies that there was no first order linear auto-correlation in the multiple linear regression data. This further implies that 87.9% of variation in operational performance is accounted for by cash management practices in the study while 12.1% of the operational performance is accounted for by other factors out of the study.

Assessing the Fit of the Multiple Regression Model

Analysis of variance was used to determine if the multiple regression model was fit for the data. The results were shown in Table 8.

Table 8: ANOVA Model

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Residual	102.882	4	19.015	112.668	0.000[b]
	Regression	9.232	92	0.16893		
	Total	**112.114**	**96**			

The linear regression's F-test has the null hypothesis that the model explains zero variance in the operational performance (F=112.668, p=0.000[b]). The F-test is highly significant, thus it is

assumed that the model explained a significant amount of the variance in operational performance. This implies that the multiple regression model was fit for the data and hence accounts payable management, accounts receivable management, inventory management and short-term borrowing affect operational performance of public universities.

The study results further revealed that the model summary predicted operational performance significantly well (p≤0.05). This indicated the statistical significance of the regression model that was run and that overall the regression model statistically significantly predicted the operational performance of public universities (that is, it was a good fit for the data).

Regression Coefficients

T-test of statistical significance of each regression coefficient was conducted in order to determine the beta which indicates how strongly each independent variable affects the dependent variable. The study results were shown in Table 9.

Table 9: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std Error	Beta	t	Sig.
(Constant)	0.323	0.224		1.648	0.105
Accounts payable management	0.182	0.026	0.319	6.604	0.000
Accounts receivable management	0.272	0.024	0.534	6.745	0.000
Inventory management	0.229	0.034	0.476	8.866	0.000
Short-term borrowing	0.216	0.046	0.253	6.354	0.000
Dependent Variable: Operational performance					

The regression equation generated for the study was as follows.

Y (Operational performance) = 0.323 (Constant) + 0.182 (Accounts payable management) + 0.272 (Accounts receivable management) + 0.229 (Inventory management) + 0.216 (short-term borrowing) + 0.224 (Std Error).

From the regression equation, accounts receivable management to operational performance of public universities contributing 27.2% to operational performance of public universities while accounts payable management contributed 32.3%, inventory management contributed 22.9% and that short-term borrowing contributed 21.6% to operational performance of Public universities respectively.

The regression equation further revealed that there was a significant relationship between accounts payable management and operational performance of public universities (β=0.182, p≤0.05); there was a significant relationship between accounts receivable management and operational performance of public universities (β=0.272, p≤0.05); there was a significant relationship between inventory management and operational performance of public universities (β=0.229, p≤0.05) and that there was a significant relationship between short-term borrowing and operational performance of public universities (β=0.216, p≤0.05).

Regression Model

The regression function in equation 4.1 was used to explain the results of the regression model analysis.

$$\mathbf{Y = 0.323 + 0.182X_1 + 0.272X_2 + 0.229X_3 + 0.216X_4}$$

…….Equation 1

The accounts payable management coefficient parameter is 0.182 meaning that for every adjustment in one unit of accounts payable management would result in a 0.182 change in operational performance of public universities while all other variables are kept constant. The coefficient parameter of accounts receivable management is 0.272 meaning that for every change in one unit of accounts receivable management would result in a 0.272 change in

operational performance of public universities while all other variables kept constant. The inventory management coefficient parameter is 0.229 meaning that for every change in one unit of inventory management, a 0.229 change in operational performance will be predicted all other variables kept constant. The short-term borrowing coefficient parameter is 0.216 meaning that for every change in one unit of short-term borrowing, a 0.216 change in operational performance will be predicted all other variables kept constant.

Hypotheses Testing

The first hypothesis was;

H_{01}: Accounts payable management have no significant effect on operational performance of public universities in Uasin Gishu County. The study findings indicated that there was a statistical significant relationship between accounts payable management and operational performance of Public universities (p=0.000). The study therefore rejected the null hypothesis and accepted the alternate hypothesis which showed that there was a relationship between accounts payable management and operational performance of public universities in Uasin Gishu County.

The second hypothesis was;

H_{02}: Accounts receivable management have no significant effect on operational performance of public universities in Uasin Gishu County. The study findings indicated that there was a statistical significant relationship between accounts receivable management and operational performance of public universities (p=0.000). The study therefore rejected the null hypothesis and accepted the alternate hypothesis which showed that there was a relationship between accounts receivable management and operational performance of Public universities in Uasin Gishu County.

The third hypothesis of the study was;

H_{03}: Inventory management have no significant effect on operational performance of Public universities in Uasin Gishu County. The study findings indicated that there was a statistical significant relationship between inventory management and operational performance of public universities (p=0.000). The study therefore rejected the null hypothesis and accepted the alternate hypothesis which showed that there was a relationship between inventory management and operational performance of public universities in Uasin Gishu County.

The fourth hypothesis was;

H_{04}: Short-term borrowing have no significant effect on operational performance of Public universities in Uasin Gishu County. The study findings indicated that there was a statistical significant relationship between short-term borrowing and operational performance of public universities (p=0.000). The study therefore rejected the null hypothesis and accepted the alternate hypothesis which showed that there was a relationship between short-term borrowing and operational performance of Public universities in Uasin Gishu County.

Table 10: Summary of Test of Hypotheses

Hypothesis	Statement	Sig.	Result
H_{01}:	Accounts payable management have no significant effect on operational performance of public universities in Uasin Gishu County.	0.000	Null hypothesis Rejected
H_{02}:	Accounts receivable management have no significant effect on operational performance of public universities in Uasin Gishu County.	0.000	Null hypothesis Rejected
H_{03}:	Inventory management have no significant effect on operational performance of public universities in Uasin Gishu County.	0.000	Null hypothesis Rejected
H_{04}:	Short-term borrowing have no significant effect on operational performance of public universities in Uasin Gishu County.	0.000	Null hypothesis Rejected

CONCLUSIONS AND RECOMMENDATIONS

The study concluded that effective accounts payable management—specifically, having and following clear payment schedules—has a significant positive impact on operational performance. Universities that ensure timely payments and structured disbursement schedules are better able to maintain good supplier relationships, avoid service disruptions, and reduce the costs associated with late fees and penalties.

The study also concludes that efficient accounts receivable management systems enhance operational performance by improving liquidity. Public universities that effectively monitor and collect dues from students and other clients can maintain steady cash flows. This financial stability enables the universities to finance daily operations smoothly and plan effectively for future expenses.

Additionally, the study concludes that inventory management plays a critical role in promoting operational efficiency. Universities that maintain optimal inventory levels reduce unnecessary storage costs and ensure that essential resources are always available. This balance supports the continuous delivery of educational services and administrative operations.

Finally, the study concludes that short-term borrowing, when managed sustainably, contributes positively to operational performance. Institutions that access and service affordable short-term loans can meet urgent financial needs without compromising their long-term financial health. Sustainable interest rates on these loans enhance universities' ability to maintain uninterrupted operations.

Based on the findings, it was recommended that public universities strengthen their accounts payable management systems. This includes creating comprehensive and realistic payable schedules, training staff on payment planning, and implementing monitoring systems to ensure strict adherence. By doing so, universities can avoid supplier disputes, maintain a steady supply of services and goods, and improve overall institutional performance.

The study recommends that public universities continue to invest in efficient receivables management systems. These should include automated tracking of payments, timely invoicing, and reminder systems for due payments. Improved receivables management would help universities increase their liquidity, enabling them to meet financial obligations promptly and enhance operational stability.

It was further recommended that universities enhance their inventory management practices by adopting digital inventory tracking systems and demand forecasting tools. This would help in maintaining the right stock levels, reducing both shortages and wastage. Well-managed inventory

systems can significantly improve operational efficiency and support uninterrupted academic programs.

Lastly, the study recommended that universities negotiate for and maintain short-term loan facilities with favorable interest rates and repayment terms. Universities should also monitor loan utilization and ensure that borrowed funds are used for productive, short-term operational needs. This will help sustain institutional performance without accumulating unmanageable debt burdens.

The study recommended that policymakers in the Ministry of Education and the Commission for University Education (CUE) develop standard financial management frameworks and guidelines that public universities must follow. This includes regulations on cash flow planning, short-term borrowing limits, accounts receivable timelines, and inventory control policies. Establishing uniform financial standards will ensure accountability, promote best practices, and enhance the overall operational performance of public universities.

The study supports the Resource-Based View (RBV) theory, which posits that internal resources - such as effective cash management practices - can provide a competitive advantage. It is recommended that future theoretical models examining university performance include financial management capabilities as key constructs. This study contributes empirical evidence supporting the integration of financial management practices as valuable, rare, and non-substitutable resources that significantly enhance institutional effectiveness.

Suggestions for Further Research

Further studies should examine the long-term effects of cash management practices on the sustainability and growth of public universities across different counties in Kenya. Additionally, future research could compare the effectiveness of cash management practices between public and private universities. Qualitative studies involving finance officers and university managers would also provide deeper insights into contextual challenges and innovative solutions in financial operations within institutions of higher learning.

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