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EFFECTIVENESS OF INTERNAL CONTROL SYSTEMS IN THE MANAGEMENT OF PUBLIC RESOURCES IN NAIROBI CITY COUNTY GOVERNMENT, KENYA

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Abstract

There is a need to strengthen the internal control systems and mechanisms in the public sector in order for counties to maintain clean financial reports. This study focused on the effectiveness of internal control systems in the management of public resources in Nairobi City County government. The effectiveness of internal controls is characterized by the implementation of all the five components, namely Control Environment, Control Activities, Risk Assessment, Information and Communication, and Monitoring. The reports of the Auditor-General and the Financial Management Report were scrutinized to check the state of affairs on the effectiveness of internal control mechanisms. The study adopted a cross-sectional descriptive survey design employing both qualitative and quantitative methods of data analysis. The target population for the study was the 60 employees in accounting/finance, administration and operations departments in the Nairobi City County Government. A purposive sampling approach was used in the study. Descriptive and inferential statistics was employed to analyze the data using the Statistical Package for the Social Science (SPSS) version 24. Descriptive statistics comprised of frequencies which include means, standard deviation and variance. Inferential statistics comprised of ANOVA and regression analysis. The study found that internal controls (Control Environment, Control Activities, Risk Assessment, Information and Communication, and Monitoring) positively and negatively influenced management of public resources in Nairobi City County government. Based on the findings, the study recommends that organizations should enhance their internal control systems, ensure transparency and accountability in budget management, and hold officials responsible for resource use and investment outcomes in order to ensure financial success

Key Words: Internal Control Systems, Management, Public Resources

INTRODUCTION

Internal control encompasses the entire range of procedures and methods established by an organization to achieve its business goals. It involves a group of policies and procedures designed to ensure adherence to management's objectives and compliance with regulations. According to Asiligwa (2017), internal controls consist of five components: control environment, risk assessment, control activities, information and communication, and monitoring.

Effective internal control systems are crucial for the reliability of financial reporting, operational efficiency, and compliance with laws. They help prevent fraud, minimize errors, and ensure the

accurate and timely preparation of financial information. The importance of internal control is emphasized globally, with significant impacts noted in both private and public sectors, including the insurance industry and government institutions.

In Kenya, the implementation of effective internal controls is vital for the management of public resources, particularly under the devolved system of government established by the new constitution. Despite the presence of internal control systems, many counties continue to experience financial distress, underscoring the need for robust controls to enhance accountability and service delivery.

Research Objectives

The study will focus on achieving the following specific objectives.

- 1. To determine the effect of control activities on management of public resources in the County Government of Nairobi City.
- 2. To establish the effect of risk assessment on management of public resources in the County Government of Nairobi City.
- 3. To evaluate the effect of control environment on management of public resources in the County Government of Nairobi City.
- 4. To establish the effect of information and communication on management of public resources in the County Government of Nairobi City.
- 5. To establish the effect of monitoring on management of public resources in the County Government of Nairobi City.

LITERATURE REVIEW

Theoretical Literature

Various theories are trying to figure out the reasoning behind effectiveness of internal control frameworks. In this case, the stewardship theory, agency theory, positive accounting theory as well as attribution theory will be talked about.

Agency Theory

The agency theory will be used to illustrate how applied to characterize the idea of the dependence between agent (s) and principal (s) in an agreement situation in which the agent is allowed to have some power on decision-production (Ali, 2020). Additionally, it is utilized to characterize the dependence among investors and admins by characterizing the responsibilities and roles driven by the trough for the investor's benefit and the investor's award to the director (Jensen & Mckling, 1976).

Agency theory expresses that an organization involves various agreements among investors and managers (Silaghi and Sarkar, 2021). Agency theory also expresses that administrators are more instructive compared to investors hence the difficulty faced by investors when they decide if their inclinations are in capable hands (Thompson, 2023). Subsequently, the theory expressed that there is need to have legitimate and sufficient agreements in an association to limit astute ways of behaving by the managers (Mwangi, 2012). For the premium to be addressed of both the director and financial backer, the agreement ought to be drafted in a way that catches the two interests. A decent specialist head relationship is by which the financial backer has frameworks that empower them to successfully screen crafted by their managers (Jussi and Petri, 2004).

Agency theory likewise expresses that inadequate agreement data on the assumption for the investors together with the managers could antagonistically affect the overall presentation of the association (Thompson, 2023). This is because the administrators will have insufficient information on what is generally anticipated of them by the specialist's prompting underexecution. Consequently, agency theory expects the idea of the connection among managers and specialist depends on abundance amplification (Jensen & Meckling, 1976). This theory is pertinent to the review since inward control components are laid out in associations to limit agency cost and work on broad hierarchical execution (Payne, 2003).

Stewardship Theory

Stewardship theory is characterized as a degree to which an individual energetically enslaves their own advantages to act in security of others' drawn-out government assistance. The theory expects that province government the board is stewards whose conduct is adjusted naturally, on arrangement, with the goals of their chiefs who are the residents. This theory expresses that for greatest abundance creation, there ought to be most extreme freedom between workers or the executives and financial backers. In this review, the steward theory upholds the way that supervisors of Nairobi City County go around as guardians of providers, investors, purchasers, loan bosses and workers of these establishments.

Positive Accounting Theory

Positive bookkeeping investigation predicts and elucidates certain bookkeeping components (Bao et al., 2022). Hypothesis adjusted to positive bookkeeping research are regularly called positive theories. The theory relies on perceptions that can be tried and enhanced eventually (Hanlon et al., 2022). Normative theories are based on convictions, and they define how certain bookkeeping practices ought to be actualized (Deegan & Unerman, 2006). The theory clarifies the presence of risk evaluation, monitoring, management exercises as well as control environment in public resources management in Nairobi County (Tuwei & Ondabu, 2022).

Attribution Theory

Fritz Heider created the attribution theory in 1958 (Malle, 2022). Attribution theory makes sense of how conduct and occasions are deciphered together with their causes (Schroth and Shah, 2000). Reffett's (2007) further expressed that reviewers' failure to recognize misrepresentation hazard can be exceptionally impeding for an association. Attribution theory expressed that evaluating decides the productivity of inside control frameworks of the association. In this way, they need to have a satisfactory comprehension of the hierarchical interior control for appropriate income age. This theory is applicable to the review since it suggests that control exercises like inside reviews are key components of control frameworks that they aid forestall extortion.

Empirical Literature

Studies on the effectiveness of internal control systems in the management of public resources have yielded significant insights. Adepeju (2013) explored the perceptions of stakeholders regarding the efficiency of internal control systems in Nigeria's public sector, with Lagos State as the primary focus. The study revealed that internal control systems significantly influence financial accountability in the public sector. Using descriptive research design and a random sampling technique, the research found that strict adherence to penalties and an effective control system are crucial for enhancing compliance and meeting public expectations. The study concluded that good governance requires robust internal control systems supported by firm penalties to ensure financial accountability.

Kumuthinidevi (2016) assessed the effectiveness of internal control frameworks in private banks in Trincomalee, Sri Lanka. The study focused on five independent variables: control environment, accounting, risk appraisal, information and communication, and control activities. The research highlighted the need for employees to adapt to changes in internal control policies and emphasized the importance of understanding individual responsibilities within the control system. The findings suggest that proper knowledge and adherence to internal controls are essential for ensuring efficiency and preventing issues within the banking sector. Ishola, Abikoye, and Olajide (2015) investigated the impact of internal control systems in Nigeria's public sector, specifically within the Nigeria National Petroleum Corporation (NNPC). The study employed a survey research design and used chi-square statistics for data analysis. The findings indicated that efficient internal control systems are vital for reducing fraud and inefficiency in the public sector. The study recommended that public sector authorities focus on strengthening internal controls to minimize fraud and improve overall performance.

Matare (2014) conducted research on the adequacy of internal financial controls in Zimbabwe's Ministry of Defense. The study, which covered the period from 2010 to 2013, revealed that while there was adherence to internal controls, they were not entirely effective. The study recommended continuous updates to policy and procedure manuals and the professionalization of the Ministry through the recruitment and training of qualified personnel. Additionally, the study emphasized the need for continuous dialogue with the Ministry of Finance to prevent budget overruns and ensure effective internal control implementation.

Conceptual Framework

The dependent variable is Management of Public assets and the independent variable is internal control frameworks which is proxied by Control Environment, Risk Assessment, Control Activity, Information and Communication and Monitoring.

Internal Control System Independent Variables

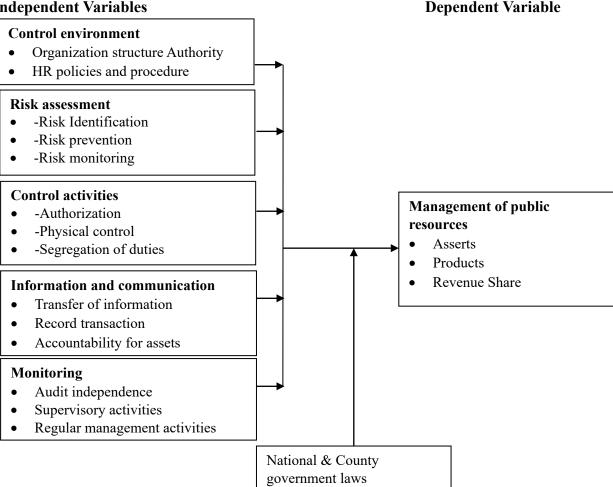


Figure 1: Conceptual Framework

RESEARCH METHODOLOGY

The study employed a cross-sectional descriptive research design, chosen for its suitability in capturing the current state of affairs and exploring the underlying reasons behind specific phenomena within their natural context (Leary, 2001). This approach allowed the researcher to conduct an in-depth analysis of the variables under investigation, providing a detailed portrayal of the situation as it exists. The methodology aligns with similar studies, such as the examination of internal control systems and financial accountability in Uganda (Eton, Murezi, Mwosi, & Ongwel, 2018), demonstrating the appropriateness of the cross-sectional descriptive design for this research. The target population for the study comprised 100 staff members working in the bookkeeping/finance, administration, and operations units within the Nairobi City County Government. Mugenda and Mugenda (2003) define a population as a complete group of individuals, events, or objects sharing common characteristics. Given the manageable size of the population, sampling was deemed necessary to ensure the efficiency of the research process.

The sample size was determined using the Nassiuma (2000) formula, which provided a precise calculation based on the total population of 100 employees. To ensure representative sampling, the study adopted a stratified sampling design, as recommended by Kothari (2004). Stratified sampling was used to select specific departments within the Nairobi City County Government, focusing on key sub-groups within the population. This technique allowed the researcher to emphasize particular sub-groups of interest, ensuring that the sample accurately reflected the diversity of the target population.

RESEARCH FINDINGS

The effect of control activities on management of public resources in the County Government of Nairobi City

Establishing the impact that control activities has on management of public resources in Nairobi City Government was the first objective of the current study. The table below shows the regression model that was used to summarize the results as shown below.

Table 1: Model Summary- Control Activities

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.363 ^a	.132	.116	.97079
a. Predio	ctors: (Co	onstant). Conti	rol activities	

The study results presented on table 1 indicate that R squared was 0.132 and that the total variation 13.2 % in management of public resources can be attributed to by control activities. This suggests that other factors not part of the study scope contributed 86.8%. The research discovered a weak connection between the control activities and management of public resources as indicated by 0.363 as the coefficient of correlation (R) value, lying below the threshold value of 0.5.

Table 2: ANOVA- Control Activities

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	8.000	1	8.000	8.489	.005 ^b
Residual	52.776	56	.942		
Total	60.776	57			

a. Dependent Variable: Management of public resources b. Predictors: (Constant), Control activities

The F value was 0.8489 as revealed by The ANOVA (Analysis of Variance) analysis and is statistically significant at the value 0.005 which lies below the conventional standard value of 0.05 as presented in the table below. This finding suggests that the research variables had a

linear correlation and that the probability of the model was below 0.05 indicating an incorrect prediction. The presented results indicate that the independent variables (control activities) used had substantial impact in predicting the public resources management at a confidence level of 95%.

Model	Unstanda Coefficier		Standardized Coefficients	t	Sig.	
	В	Std. Error	Beta	-		
(Constant)	3.528	.431		8.182	.000	
Control activities	400	.137	363	-2.914	.005	

Table 3: Coefficients- Control Activities

Derived multiple regression equation from the data in the table 4.11 was:

$$Y = 3.528 - 0.400X_1$$

Holding control activities consistent the management of public resources will be 3.528, also a unit increase in control activities the management of public resources will reduce by 0.400 units, this shows existence of a negative connection between the administration exercises and management of public resources as demonstrated a by a beta value of -0.400.

The effect of risk assessment on management of public resources in the County Government of Nairobi City

The risk assessment impact determination on the public resources management in Nairobi City County Government was the second objective of the current study.

Table 4: Model Summary- Risk Assessment

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.164 ^a	.027	.009	1.02770
a. Predict	tors: (Consta	nt). Risk assessment		

The study results on the whether public resource management is elucidated by risk assessment showed R squared was 0.027 while the total variation was 2.7% as seen on table 4.12. This indicates that other factors not within the scope of study contributed 97.3%. Additionally, handling of public resources and risk management had a coefficient of correlation (R) value of 0.164 which is below the standard threshold of 0.5 indicating a slight correlation.

Table 5: ANOVA- Risk Assessment

Model		Sum of	df	Mean	F	Sig.
		Squares		Square		
1	Regression	1.630	1	1.630	1.544	.219 ^b
	Residual	59.146	56	1.056		
	Total	60.776	57			
-	1		0 1 1 !			

a. Dependent Variable: Management of public resources

b. Predictors: (Constant), Risk assessment

The F value of the current study was 1.544 as revealed by the ANOVA (Analysis of Variance) analysis and is statistically insignificant at the value 0.219 since it is more than 0.05 as shown on the table. The probability value of the model was higher than 0.05 suggesting a linear correlation of the study variables thereby providing a prediction that is inaccurate. The research results showed a significance level of 95% and showed lack of statistical significance in the prediction of public resource management through independent variables i.e. risk assessment.

Moc	lel	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		В	Std. Error	Beta	_	
1	(Constant)	3.101	.637		4.867	.000
	Risk assessment	218	.175	164	-1.242	.219
a D	opondont Variable. N	Ianagaman	t of public resour	roos		

Table 6: Coefficients- Risk Assessment

Variable: Management of public resources

Derived multiple regression equation from the data in the table 6 was:

 $Y = 3.101 - 0.218X_2$

Holding risk assessment constant the management of public resources will be 3.101, also a unit leads to risk assessment increase in the management of public resources will reduce by 0.218 units, this implies risk assessment is negatively correlated to the management of public resources as indicated a by a beta value of -0.218.

The effect of control environment on management of public resources in the County **Government of Nairobi City**

The evaluation of control environment impact on the public resources management in Nairobi City County Government was the third aim of the current study.

Table 7: Model Summary- Control Environment

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.522 ^a	.272	.259	.88870
a. Predie	ctors: (Co	onstant), Conti	rol environment	

The study results on whether the management of public resources is affected by the control environment showed R squared value of 0.272 indicating that 27.2% total variation as seen on table 7 In essence, 72.8% was contributed by other factors outside the study scope. The control environment is strongly correlated with public resources administration with a coefficient of correlation (R) value of 0.522 which is more than the standard threshold of 0.5.

	ele 8: ANUVA- (Control Environment				
Mo	odel	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.547	1	16.547	20.952	$.000^{b}$
	Residual	44.228	56	.790		
	Total	60.776	57			

a. Dependent Variable: Management of public resources

b. Predictors: (Constant), Control environment

The F value reported was 20.952 as determined by ANOVA (Analysis of Variance) analysis and was statistically significant at a value of 0.00 and is below the standard threshold value of 0.05 as indicated on the table. The probability value of the model was less than 0.05 showing that the study variables have a linear correlation and leads to inaccurate prediction. The study results reveal that the control environment serving as independent variables is significantly used in predicting public resources management at a significance level of 95%.

Model	Unstanda Coefficie		Standardized Coefficients	t	Sig.
	В	Std. Error	Beta	-	
(Constant)	1.097	.293		3.743	.000
Control environment	.499	.109	.522	4.577	.000
a. Dependent Variable: M	anagement o	f public resourc	es		

Derived multiple regression equation from the data in the table 9 was:

$$Y = 3.101 - 0.218X_3$$

Holding control environment constant the management of public resources will be 1.097, also a unit increase in control environment the management of public resources will increase by 0.499 units, this indicates they are positively related to the control environment and management of public resources as depicted a by a beta value of 0.499.

The effect of information and communication on management of public resources in the County Government of Nairobi City

The determination of the impact of communication and information on public resources management by County Government of Nairobi City was the fourth goal of the current study. **Table 10: Model Summary-Information and Communication**

	_	D S		
Model	R	R Square	Adjusted R Square	Std. Error of the
				Estimate
1	.019 ^a	.010	.017	1.04158
a. Predict	tors: (Consta	nt), Information and	communication	

The study results to determine whether information technology attributed to public resource management had a R squared value of 0.010 and 1.0% total variation as shown on table 10. The 99% was considered to be contributed by the other factors outside the study. The information technology effect on public resources management had a coefficient of correlation (R) value of 0.019 which is below the standard threshold of 0.5 indicating a weak correlation.

Table 11: ANOVA- Information Communication

Model		Sum Squares	of	df	Mean Square	F	Sig.
1	Regression	.022		1	.022	.020	$.887^{b}$
	Residual	60.754		56	1.085		
	Total	60.776		57			

a. Dependent Variable: Management of public resources

b. Predictors: (Constant), Information and communication

The F value was 0.020 as determined by ANOVA (Analysis of Variance) analysis which is statistically insignificant at 0.887 and is higher than the standard threshold of 0.05. This depicted correlation between the variables under examination is linear, and that the model had a probability of over 0.05 of generating an incorrect prediction. Moreover, the independent variables on information and communication significantly contribute to predicting the control of public assets at a confidence level of 95%.

Table 12: Coefficients- Information Communication

Model	Unstan Coeffic	dardized cients	Standardiz ed Coefficient s	t	Sig.
	В	Std. Error	Beta	-	
(Constant)	2.384	.419		5.696	.000
Information and communication	017	.123	019	142	.887
a. Dependent Variable: Manageme	-				

Derived multiple regression equation from the data in the table 12 was:

 $Y = 2.384 - 0.017X_4$

Holding information communication constant the management of public resources will be 2.384, also a unit increase in information communication the management of public resources will decrease by 0.017 units, this indicates there is an inverse relationship between the information communication and management of public resources as demonstrated a by a beta value of -0.017. The effect of monitoring on management of public resources in the County Government of Nairobi City

The fifth goal aimed at determining how monitoring impacts management of public assets in the Nairobi City County Government.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.344 ^a	.118	.102	.97830	
a. Predict	tors: (Constai	nt), Monitoring			

Table 13: Model Summary- Monitoring

The research results on whether monitoring elucidates public resources management showed R squared value of 0.118 and 11.8% total variation as seen on table 13. The 88.2% was contributed by other factors outside the scope of the study. Additionally, monitoring and management of public resources indicated a coefficient of correlation (R) value of 0.344 which is below the standard threshold of 0.5 indicating a weak correlation.

Mode	el	Sum Squares	of	df	Mean Square	F	Sig.
1	Regression	7.180		1	7.180	7.502	$.008^{b}$
	Residual	53.596		56	.957		
	Total	60.776		57			

Table 14: ANOVA- Monitoring

a. Dependent Variable: Management of public resources

b. Predictors: (Constant), Monitoring

The F value was 7.502 as determined by ANOVA (Analysis of Variance) analysis indicating it was statistically significant at 0.008 and is below the standard threshold of 0.05. The examined variables therefore showed a linear correlation with the model probability value being lower than 0.05 leading to the possibility of making false predictions. The given results suggest that the independent variables (monitoring) used was influential in predicting public resources management at a significance level of 95%.

Table 15: Coefficients- Monitoring

Model	Unstanda Coefficien		Standardized Coefficients	t	Sig.
	В	Std. Error	Beta	-	
(Constant)	1.427	.353		4.045	.000
Monitoring	.304	.111	.344	2.739	.008
a. Dependent Var	iable: Manager	nent of public res	ources		

Derived multiple regression equation from the data in the table 15 was:

$$= 1.427 + 0.304X_5$$

Maintaining the monitoring constant at a consistent level, public resources management is measured at 1.427, furthermore a unit rise in monitoring public resources management is associated with 0.304 units increase, demonstrating a positive correlation between the monitoring and management of public resources as indicated a by a beta value of 0.304.

Model	R	R Square	Adjusted R Square		Std. Error	of the
					Estimate	
1	.673 ^a	.452	.400		.80005	
a. Prec	lictors: (Cons	tant), Monitoring,	Information	and co	ommunication,	Control

Table 16 shows the model fitness output and R squared value as 0.452 as revealed by the model summary. This indicates that the variables (Monitoring, Information and communication, Control activities, Control environment, Risk assessment) account for 45.2% of the variation of management of resources at a confidence level of 95%. Hence, it is inferred that other factors outside the scope of study account for 54.8%. The existing variables relationship is reflected by the correlation coefficient R. The correlation coefficient R value from the study was 0.673 which indicates that the research variables had a considerable positive relationship.

Table 17: ANOVA Model of df F Sum Mean Sig. Square Squares 1 5 Regression 27.492 5.498 8.590 .000 52 Residual 33.284 .640 Total 60.776 57

a. Dependent Variable: Management of public resources

46 36 310

b. Predictors: (Constant), Monitoring, Information and communication, Control activities, Control environment, Risk assessment

The F value was 8.590 as determined by ANOVA (Analysis of Variance) analysis and is statistically significant at 0.000 which is less than the standard 0.05 threshold value as seen on table 17. The probability of the model was lower than 0.05 leading to incorrect predictions while the variables showed a direct correlation. The results according to the current study indicates that independent variables (Monitoring, Information and communication, Control activities, Control environment, Risk assessment) did not indicate statistical significance in predicting the management of resources at a significance level of 95%.

Table 18: Coefficients Model Unstandardized Standardized Sig. t Coefficients Coefficients Β Std. Error Beta 2.046 1.997 .051 (Constant) 1.024 Control activities -.464 .120 -.421 .000 3.855 Risk assessment .041 .170 .031 .242 .810 Control environment .393 .111 .411 3.545 .001 Information -.038 .099 -.042 .699 and -.388 communication Monitoring .230 .119 .260 1.929 .059

a. Dependent Variable: Management of public resources Through the assessment of coefficients or beta values of each of the stu

Through the assessment of coefficients or beta values of each of the study variables, the research was able to determine each independent variables significance in the study. The variables relationship was guided by the beta values. A positive relationship was signified by a positive sign while a negative relationship was signified by a negative sign. The current study provided

the multiple regression equations with both unstandardized and standardized coefficients. Nevertheless, analysis and interpretation are focused on the unstandardized coefficients:

Y = 2.046 - 0.464X1 + 0.041X2 + 0.393X3 - 0.038X4 + 0.230X5

The given regression equation indicates that independent variables such as Control activities, Risk evaluation, Control environment, communication and information and Monitoring) have been found to be constant Management of public resources will be 2.046. Control activities had negative coefficients of -0.464, Risk assessment had a positive beta coefficient of 0.041, Control environment had a positive coefficient of 0.393, Information and communication had a negative coefficient of -0.038 and monitoring had a positive coefficient of 0.230.

Conclusions

The study established that company culture forms a critical foundation for conducting internal control activities. It highlighted that the Nairobi City County Government prioritizes honesty, ethical principles, and skilled personnel development, yet faces challenges in public resource management due to ineffective management exercises. The presence of an audit charter and an approved work plan suggests compliance, but risk assessment has an insignificant impact on resource management. The control environment positively impacts public resource management, rejecting the null hypothesis of its insignificance. While information and communication do not significantly affect management, monitoring does have a mixed impact, leading to the rejection of some null hypotheses but not all.

Recommendations

The study recommends enhancing internal control systems for financial success, emphasizing transparency, accountability, and the efficient use of resources. It suggests regular training for internal audit staff and investing in the development of young professionals to ensure continuity and improved performance. Additionally, it proposes pursuing legal remedies for misappropriated funds. For future research, the study encourages expanding the scope to include various organizations, such as commercial banks, to benchmark.

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