



Continuous adaptation and Performance of Information Technology Projects of Tier one Commercial Banks in Kenya

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ABSTRACT

The effective execution of information technology (IT) projects is crucial for sustaining a competitive advantage in Kenya's rapidly evolving banking sector. Despite this importance, many IT projects in commercial banks often fail to meet their intended performance goals due. Moreover, there has been little emphasis on flexibility and adaptation, which are essential for ensuring responsiveness to dynamic technological and market changes. Therefore, the current research examined the continuous adaptation and its effect on performance of information technology projects in tier one banks in Kenya. The study was anchored on theory of agile project management. The study adopted an explanatory research design. The target population was the eight Tier-1 commercial banks, which formed the unit of analysis. The unit of observation comprised the 128 individuals involved in execution and management of IT projects. Data was collected through structured questionnaire and analyzed using SPSS. The results showed that the correlation coefficient was ($r = 0.664$; $p=0.000$). The regression analysis revealed an R^2 value of 0.441, indicating that approximately 44.1% of the variation in project performance was explained by continuous adaptation. These findings imply that continuous adaptation affect the performance of information technology projects in tier-one banks. The study concludes that continuous adaptation is vital for enhancing the resilience and overall performance of information technology projects by promoting agility and responsiveness to dynamic operational environments. The study recommends that tier-one banks strengthen their agile project management approaches by institutionalizing adaptive practices that enable timely alignment of project strategies with emerging technological and regulatory changes to improve performance.

Key words: Agile Project Management, Continuous Adaptation, Performance of Information Technology, Projects.

1. INTRODUCTION

Agile project management takes a progressive approach that transforms how projects are conceived, executed, and evaluated, particularly in fast-evolving environment (Seeton, 2022). It promotes flexibility, collaboration, and continuous responsiveness to emerging priorities, allowing teams to align project outcomes with shifting stakeholder expectations and technological advancements. This fosters a culture of shared accountability, where cross-functional teams work cohesively to deliver incremental value while maintaining focus on quality and efficiency. By emphasizing real-time learning and adjustment, agile project management enhances innovation, reduces project risks, and supports sustainable performance (Rajan, & Santhosh, 2021). Information technology projects represent the backbone of digital transformation, enabling organizations to modernize systems, streamline operations, and deliver innovative services. In the banking sector, they drive efficiency by automating transactions, enhancing data integrity, and improving customer engagement through secure and seamless digital platforms (Žužek, Gosar, Kušar & Berlec, 2020). Their success depends on effective coordination, adaptive planning, and the ability to align evolving technologies with strategic objectives. When well-executed, IT projects not only strengthen institutional capacity but also position organizations to thrive in an increasingly technology-driven and competitive environment.

Continuous adaptation within agile project management, embodies the capacity of teams to adjust strategies, workflows, and priorities in response to evolving project realities and stakeholder expectations (Raharjo & Purwandari, 2020). In the context of information technology projects, continuous adaptation enables teams to navigate dynamic technological landscapes, integrate emerging innovations, and address unforeseen challenges without compromising project momentum. This practice fosters resilience by ensuring that projects remain aligned with organizational goals while accommodating shifts in requirements or market conditions. Project teams cultivate agility, enhance collaboration, and sustain consistent performance. In Kenyan commercial banks, information technology projects primarily drive digital transformation through innovations in digital payments, customer experience enhancement, and data analytics, with a growing focus on cybersecurity to sustain competitiveness and service quality (Ondiek, 2021). However, despite advancements such as PesaLink, money transfer systems, and M-Pesa-to-bank integrations, the Kenya Bankers Association reports that implementation remains uneven, only 26 banks have fully adopted these services, while others continue to face persistent operational and infrastructural challenges.

Moreover, only 57 percent of customers actively use mobile-based applications, highlighting ongoing constraints in the adoption and performance of IT initiatives (Charo & Gachengo, 2024). Okong'o (2022) observed that most banks have experienced at least two unsuccessful IT projects that failed to meet their intended objectives, budgets, or timelines. Similarly, Muhinja and Nyanga'u (2021) revealed that 25 percent of IT projects in Kenyan commercial banks fail within the planned timeframe, 20 to 25 percent show no tangible return on investment, and about half require redesigns before completion. Correspondingly, Maina and Mungai (2024) found that over 60 percent of ICT projects encounter cost and schedule overruns, with 56 percent failing to achieve their performance targets, underscoring the persistent implementation challenges within the sector. The Central Bank Report (2024) noted remarkable progress in implementing the Enterprise Data Warehouse (EDW) project, which aimed to strengthen the Bank's capacity to utilize large volumes of data for evidence-based decision-making. Despite such advancements, Charo and Gachengo (2024) reported that several IT projects in Kenyan banks had failed to meet their objectives. Supporting this view, Muhinja and Nyanga'u (2021) established that 25% of IT projects in commercial banks fail within the designated implementation period, 20–25% yield no measurable return on investment, and half require modifications before completion. Similarly, Maina and Mungai (2024) found that more than 60% of ICT projects in Kenyan banks experience cost and schedule overruns, while 56% fail to achieve their intended goals. The Kenya Bankers Association (2023) also highlighted persistent challenges in implementing IT projects such as PesaLink, money transfer systems, and M-Pesa-to-bank integrations, attributing these shortcomings to inadequate project management competencies that undermine overall performance.

Although several studies have examined project management practices, limited research has specifically examined how continuous adaptation within agile project management influences the performance of IT projects. For instance, Muhammad et al. (2021) assessed the impact of agile management on project performance within Pakistan's IT sector, presenting a contextual gap. Similarly, Muli and Muchelule (2024) analyzed agile project management approaches in Nairobi's real estate firms, focusing on iterative and adaptive techniques, which revealed a conceptual gap. In addition, Obonyo and Muchelule (2024) examined the application of agile methods in telecommunication infrastructure projects in Nairobi City County, but their emphasis on the telecom sector created another contextual limitation. The current study therefore assessed the effect of continuous adaptation on the performance of information technology projects in tier one commercial banks in Kenya.

2. OBJECTIVE OF THE STUDY

The objective of the study was to determine the effect of continuous adaptation on performance of information technology projects in tier one commercial banks in Kenya.

3. LITERATURE REVIEW

Continuous adaptation reflects an organization's deliberate effort to remain agile and responsive by consistently monitoring its internal operations and external environment while identifying emerging trends (Bachinger, Kronberger, & Affenzeller, 2021). It involves making timely adjustments to strategies, systems, and processes to sustain competitiveness and drive innovation. It requires cultivating a mindset of vigilance and openness to change,

where project teams anticipate disruptions and proactively realign their goals to accommodate new realities rather than reacting passively to challenges (Sapeta, Centeno, Belar & Arantzamendi, 2022). According to PMI (2021), the capacity for continuous adaptation and learning has become an indispensable element of modern project management, as organizations increasingly operate in complex, uncertain, and fast-evolving environments that demand flexibility, creativity, and a willingness to learn from experience. In project management, continuous adaptation involves the ongoing revision of plans, priorities, and resource allocations throughout the project lifecycle to ensure alignment with changing stakeholder expectations, technological shifts, and environmental uncertainties (Bachinger et al., 2021). This dynamic and iterative approach not only reinforces project resilience but also enhances learning and knowledge sharing within teams, leading to solutions that are more innovative, inclusive, and contextually relevant (Backlund & Sundqvist, 2020). As PMI (2021) underscores, projects that embrace adaptive learning and flexibility tend to navigate uncertainty more effectively, enabling project managers to transform potential risks into opportunities for growth and improvement rather than barriers to success.

Furthermore, continuous adaptation enhances performance by encouraging reflective practice and data-driven decision-making, allowing organizations to refine their operations and achieve better quality outcomes within shorter timeframes (Sapeta et al., 2022). The process of learning from ongoing experiences helps teams identify performance gaps, streamline workflows, and deploy resources more strategically, resulting in enhanced efficiency and productivity (Frank & Mohamed, 2024). When embedded into organizational culture, continuous adaptation nurtures an agile mindset that empowers teams to respond promptly to changing market conditions, regulatory shifts, and customer demands, thereby strengthening organizational resilience and long-term sustainability (PMI, 2021). To fully institutionalize this practice, organizations particularly in the banking sector should invest in capacity-building initiatives such as workshops, mentorship programs, and online learning platforms that enhance employee competencies, creativity, and responsiveness to change (Budhiraja & Rath, 2023). In this study, continuous adaptation is evaluated through three key dimensions: continuous learning, continuous improvement, and adaptability. The performance of IT projects in tier-one commercial banks is largely reflected through their ability to deliver outcomes. Projects that adhere to the delivery schedule demonstrate effective planning and coordination, enabling timely implementation of critical activities and minimizing disruptions that often lead to costly delays. Maintaining the delivery budget reflects prudent resource utilization, cost control, and financial discipline, ensuring that expenditures remain aligned with approved allocations while maximizing value for money. Equally important is the extent to which project objectives are achieved, as this indicates the project's success in delivering intended functionalities, enhancing operational efficiency, and meeting user expectations.

The theory of agile project management is grounded in the belief that project success depends on flexibility, collaboration, and iterative progress rather than adherence to fixed plans and processes (Tanchaisak & Niyomves, 2024). It emphasizes adaptability to changing conditions, continuous stakeholder engagement, and incremental delivery of project outcomes to ensure responsiveness to user needs and emerging challenges. The theory advocates for breaking projects into smaller, manageable phases where teams can frequently assess progress, integrate feedback, and make adjustments that enhance efficiency and quality. By prioritizing communication, teamwork, and learning throughout the project lifecycle, agile project management enables organizations to navigate uncertainty, foster innovation, and deliver solutions that align more closely with client expectations and dynamic market environments. The theory of agile project management relates to continuous adaptation by emphasizing the need for flexibility and iterative adjustments in managing complex IT projects within banking institutions (Tanchaisak & Niyomves, 2024). In this context, continuous adaptation enables project teams to respond swiftly to regulatory changes, evolving customer needs, and technological advancements that characterize the banking environment. The theory advocates for a culture of ongoing improvement, where feedback is continuously integrated to enhance efficiency. Figure 1 indicate the association between the continuous adaptation and performance of information technology projects.

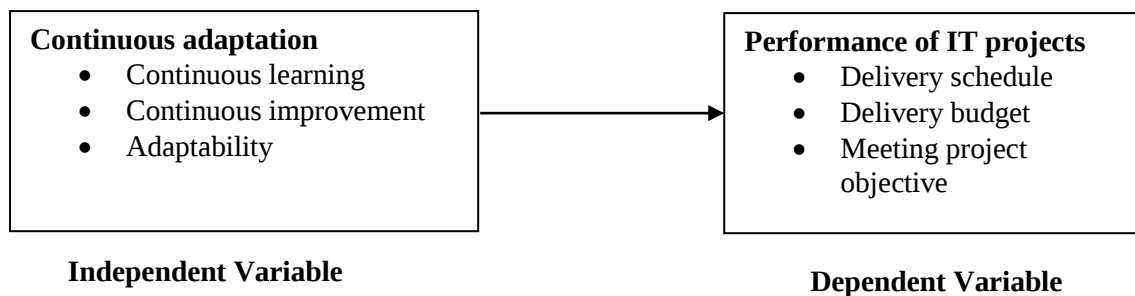


Figure 1: Conceptual Framework

Several studies related to continuous adaptation and performance of projects have been reviewed. Del-solar Serrano, del Río Merino and Villoria Sáez (2020) focused on methodology for continuous improvement projects in housing constructions. This article shows a procedure based on Continuous Improvement Projects, which can be used in building constructions, and it is structured into four phases: Plan, Do, Check, Act, following the PDCA Quality Cycle. In addition, the method developed was specified for ceramic tiling execution and was further implemented in three building projects of Spain. The results obtained concluded that the proposed Procedure can be used by construction professionals who are concerned about improving the quality of construction. In addition, the implementation of the Procedure managed to reduce around 45% the costs derived from the defects caused during the ceramic tiling execution, due to the best practices incorporated in the Procedure. A slight increase in the number of defects was also found, motivated by the thorough inspection conducted when the Procedure was applied. The study focused on housing constructions while the current study focused on IT projects. Implementing ongoing adaptation to technological innovation in complex adaptive organizations was the main emphasis of Hasgall and Ahituv's (2021) study. A sample of 300 employees from 20 companies that have recently implemented technological innovation filled out online surveys. The associations between employees' views toward the innovation and their functioning as CAS fractals, as well as between their sentiments and the caliber of technology use, were investigated using Pearson and regression analysis. Functioning as CAS fractals was found to be strongly positively correlated with attitudes toward technological innovation, and these attitudes were found to be positively correlated with the quality of technology consumption. The study however failed to focus on the performance of IT projects.

Backlund and Sundqvist (2020) focused on continuous improvement: challenges for the project-based organization. An exploratory and qualitative approach has been used, involving six management teams in six different PBOs, using focus groups interviews as data collecting method. A high degree of autonomy among project managers seems to limit a collective approach to project management in PBOs. As a consequence, the overall PBO performance becomes subordinate to the individual project performance—an approach opposite to that of CI. Further, the management teams themselves seem to uphold a project focus, also complicating improvement initiatives from a PBO-perspective. Continuous adaptation for interactive object segmentation by learning from corrections was the main focus of Kontogianni, Gygli, Uijlings, and Ferrari (2020). These methods train on big datasets to attain high performance, but they maintain the model parameters at test time. Rather, we acknowledge that user corrections can be used as sparse training examples, and we provide a technique that takes advantage of this concept to dynamically adjust the model parameters to the available data. The study however failed to show the effect of continuous adaptation on project performance. The continual adaption of a digital twin model for a pilot flotation plant was the main emphasis of Ohenoja et al. (2023). Initially, a computerized model of a pilot-scale plant's flotation and grinding phases was created. The experimental campaign involved switching from copper-zinc-pyrite ore to a blend of material high in pyrite and non-sulfide gangue. Consequently, a significant shift in flotation performance was noted during the experiments, which a constant-parameter digital twin model was unable to reproduce. Using the elemental grades in various flotation phases, it was discovered that the suggested parameter adaptation framework—which includes stochastic optimization in shifting time windows—was appropriate for identifying new optimal model parameters under fluctuating experimental conditions. The study however left out the aspect of IT projects in commercial banks.

Sapeta, Centeno, Belar and Arantzamendi (2022) focused on adaptation and continuous learning: integrative review of coping strategies of palliative care professionals. Thirty-one studies were included. Proactive coping, which involves activities to gain self-confidence and control situations and emotions; self-care-based coping, which includes self-protection and self-awareness activities with behavioral disconnection; self-transformation coping, which involves activities to accept limits; and encountering deep professional meaning, which is a coping mechanism based on meaning, often taking into consideration the deepest meaning of work, were the four main strategies that were found with frequent reference to time. Family, professional drive, teamwork, and training were the dynamic and influential variables. Although they occasionally represented risk factors, they were mostly protective factors. Risk factors were always systemic pressures and the emotional toll of healthcare. An explanatory model explains a dynamic and intricate process that combines more introspective and commonplace tactics. The study however did not show any relationship between continuous adaptation and performance of projects.

Rangira and Gathiru (2023) focused on effect of adaptive planning on performance of construction projects in Rwanda. A descriptive survey method was used for this study. One hundred and twenty respondents with experience in project management made up the study's primary emphasis. A sample size of 93 respondents was determined using Slovin's formula. Secondary information was gathered for this study from records kept by the Cheetah Construction Company in Rwanda. In addition, questionnaires were sent to gather primary data. Respondents' experiences and insights formed the basis for the study's analysis and interpretations. The results indicated that several key elements play a role in project performance. This suggested that there is no statistically significant relationship between adaptive planning and the performance of construction projects. The study was done in Rwanda while the current study was done in Kenya. Karani, Kariuki, and Osman (2022) focused on tracking adaptability and evaluating the progress of Kenya. The purpose of the study was to determine whether the advantages of adaptation measures created under the CAF could be measured using the TAMD methodology. Therefore, gathering baseline data to gauge the future efficacy of interventions, mainstreaming the TAMD approach into new ward and district-level planning structures, and preparing staff to finish the final steps of the TAMD evaluation process after the interventions are finished were the primary tasks carried out during the TAMD feasibility study. The study however left out the aspect of IT projects in commercial banks.

The above studies have provided important information on project management practices though limited attention to continuous learning, continuous improvement, and adaptability as integral components of agile project management. Most research on continuous learning has primarily emphasized knowledge transfer and post-project reviews without examining how ongoing learning throughout the project lifecycle influences responsiveness to emerging challenges. The current study addressed this gap by assessing how continuous learning enhances flexibility and informed decision-making during project execution. Similarly, while previous studies have recognized continuous improvement as essential for efficiency, they often focused on process optimization at the organizational level rather than its iterative role in refining IT project outcomes. This study filled that gap by evaluating how consistent refinement and feedback integration contribute to better project performance in tier-one commercial banks. Additionally, research on adaptability has frequently centered on organizational resilience in general business environments, with little empirical evidence on how adaptive practices support IT project teams in managing uncertainty and technological shifts among tier one commercial banks.

4. METHODOLOGY

The current study employed an explanatory research design. The design helped in explaining the causal-effect relationship between variables. This study sought determine the effect of agile project management on performance of information technology projects in tier one commercial banks in Kenya. The target population was the eight Tier-1 commercial banks with ongoing IT projects, which formed the unit of analysis. The unit of observation comprised the 128 individuals involved in execution and management of IT projects. These were specifically the project managers, business analysts, software developers, quality assurance, project supervisors, and testing specialists. A questionnaire was used to gather primary data. After data collection, the information was edited, coded, categorized, and entered into the Statistical Package for Social Sciences (SPSS) for analysis. Both descriptive and inferential statistical methods were applied to draw conclusions and make generalizations about the study population. The descriptive statistics

included frequencies, mean scores, and standard deviations, while regression and correlation analyses were used as the inferential techniques. The results were presented using tables, and the following linear regression model was applied:

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

Where;

Y = Performance of IT projects

β_0 = Constant

β_1 = Beta Coefficient

X_1 = Continuous Adaptation

ε = Error of Margin

5. FINDINGS AND DISCUSSIONS

This section presents the study's descriptive and inferential findings, discussions and interpretation. Specifically, the effect of continuous adaptation on performance of information technology projects by tier one commercial banks in Kenya was analyzed.

5.1 Descriptive Findings and Discussion

The study sought to determine the effect of continuous adaptation on performance of information technology projects. The findings are presented in Tables 1 and 2:

Table 1: Effect of Continuous Adaptation on Performance of Information Technology Projects

	N	SA	A	N	D	SD	Mean	Std. Dev
	Percentage (%)							
Continuous learning within the department improves IT project performance.	99	41.4	45.5	12.1	1	0	4.27	0.712
The department focuses on continuous improvement to enhance project quality.	99	32.3	48.5	15.2	4	0	4.09	0.797
The department adapts quickly to new project requirements.	99	20.2	44.4	21.2	8.1	6.1	3.65	1.082
The department quickly overcome unexpected challenges during a project.	99	41.4	35.4	14.1	9.1	0	4.09	0.959
Alteration is embraced to meet new needs, ensuring success.	99	38.4	42.4	13.1	6.1	0	4.03	0.865

Based on the findings in Table 4.3 show that 41.4% of the respondents strongly agreed, while 45.5% agreed, resulting in 86.9% who expressed agreement (Mean = 4.27; Std. Dev. = 0.712) that continuous learning within the department improves IT project performance. As such, fostering a learning-oriented culture enhances employees' adaptability and technical competence, which are vital for handling evolving technological systems in tier one banks. Similarly, continuous learning empowers teams to apply innovative solutions and minimize errors, ultimately contributing to higher project success rates and institutional resilience. 32.3% of the respondents strongly agreed and 48.5% agreed, thus 80.8% at least agreed (Mean = 4.09; Std. Dev. = 0.797) that the department focuses on continuous improvement to enhance project quality. The finding underscores the critical role of iterative review and process refinement in sustaining high performance in complex IT initiatives. Such a commitment to ongoing enhancement ensures that project teams remain efficient, quality-driven, and responsive to emerging client and market demands.

Additionally 64.6% agreed but 21.2% were indifferent (Mean = 3.65; Std. Dev. = 1.082) on whether their respective departments adapts quickly to new project requirements. The findings also showed that 41.4% of the respondents strongly agreed and 35.4% agreed, resulting in a total of 76.8% who agreed (Mean = 4.09; Std. Dev. = 0.959) that

their respective departments quickly overcomes unexpected challenges during a project. This reflects the value of proactive risk management and problem-solving competencies in maintaining project continuity. In highly regulated financial environments, such responsiveness safeguards IT systems against disruptions, ensuring operational stability and compliance. Furthermore, 38.4% of the respondents strongly agreed and 42.4% agreed, giving a total of 80.8% who agreed (Mean = 4.03; Std. Dev. = 0.865) that alteration is embraced to meet new needs, ensuring project success. This indicates that flexibility in project execution enables teams to align deliverables with changing priorities and stakeholder expectations. Through institutionalizing a culture of constructive change, tier one banks enhance innovation, maintain project relevance, and achieve sustainable performance in their IT projects.

Table 2: Performance of Information Technology Projects

	N	SA	A	N	D	SD	Mean	Std. Dev
	Percentage (%)							
The goals of IT projects are met, satisfying both project owners objectives and stakeholders.	99	33.3	46.5	20.2	0	0	4.13	0.723
Projects are delivered on time, meeting key milestones and deadlines.	99	26.3	52.5	20.2	1	0	4.04	0.713
Funds allocated at the start are effectively utilized throughout the project.	99	38.4	45.5	15.2	1	0	4.21	0.732
Customers are satisfied with our deliverables, and their feedback shapes future projects.	99	34.3	48.5	15.2	2	0	4.15	0.747
Agile practices reduce costs and inefficiencies, improving project outcomes.	99	38.4	45.5	12.1	4	0	4.18	0.800

The findings in Table 4.5 show that 33.3% of the respondents strongly agreed, while 46.5% agreed, resulting in a combined total of 79.8% who expressed agreement (Mean = 4.13; Std. Dev. = 0.723) that the goals of IT projects are met, satisfying both project owners' objectives and stakeholders. It was established that 26.3% strongly agreed and 52.5% concurred, hence 78.8% at least agreed (Mean = 4.04; Std. Dev. = 0.713) that projects are delivered on time, meeting key milestones and deadlines. Additionally, the study revealed that 38.4% of the respondents strongly agreed and 45.5% agreed, thus 83.9% agreed (Mean = 4.21; Std. Dev. = 0.732) that funds allocated at the start are effectively utilized throughout the project. Furthermore, 34.3% of the respondents strongly agreed and 48.5% agreed, giving a total of 82.8% who agreed (Mean = 4.15; Std. Dev. = 0.747) that customers are satisfied with deliverables and their feedback shapes future projects. Moreover, 38.4% of the respondents strongly agreed and 45.5% agreed, making a total of 83.9% who agreed (Mean = 4.18; Std. Dev. = 0.800) that agile practices reduce costs and inefficiencies, thereby improving project outcomes. The descriptive findings revealed that emphasis on continuous learning, collaboration, and flexibility enables project teams to respond swiftly to changing requirements and unforeseen challenges, thereby sustaining quality and innovation. Therefore, performance of information technology projects was affected by continuous adaptation.

5.2 Inferential Findings and Discussion

The correlation analysis and linear regression analysis were used to assess the nature of relationships and the predictive effect of continuous adaptation and performance of information technology projects.

5.2.1 Correlation Analysis

The Pearson's product moment correlation coefficient was used to evaluate the strength and direction of the relationship between the continuous adaptation and the performance. The results of this correlation analysis are presented in Table 3:

Table 3: Correlation between Continuous Adaptation and Performance

		Performance of IT Projects
Continuous Adaptation	Pearson Correlation	.664**
	Sig. (2-tailed)	.000
	N	99

The findings show that there is a significant relationship between continuous adaptation and project performance ($r = 0.664^{**}$; $p = 0.000$). The positive correlation means an increase in continuous adaptation contribute to increase in performance of information technology projects. This relationship underscores the importance of learning agility and process refinement in dynamic technological environments. Continuous learning within departments enhances employees' capacity to respond to emerging challenges and innovations, ensuring ongoing project relevance. Equally, a commitment to continuous improvement drives quality assurance and process optimization, leading to consistent performance gains. Adaptability further enables teams to quickly realign strategies in response to evolving client demands or technological shifts, fostering resilience and maintaining project success in fast-changing banking contexts.

5.2.2 Regression Analysis

A regression analysis was carried out to examine the effect of continuous adaptation on the performance of information technology projects in tier-one commercial banks in Kenya. The results are summarized in Tables 4, 5, and 6:

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.664 ^a	.441	.435	.32430

a. Predictors: (Constant), Continuous Adaptation

The findings reveal a coefficient of determination (R^2) of 0.441, indicating that continuous adaptation accounted for 44.1% of the variation in the performance of information technology projects. This demonstrates that continuous adaptation plays a significant role in enhancing project performance.

Table 5: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.041	1	8.041	76.459	.000 ^b
	Residual	10.202	97	.105		
	Total	18.243	98			

a. Dependent Variable: Performance

b. Predictors: (Constant), Continuous Adaptation

The Analysis of Variance (ANOVA) results indicate an F-value of 76.459 and a p-value of 0.000, signifying statistical significance at the 95% confidence level. This validates that the linear regression model was both statistically sound and appropriate for the data. Consequently, continuous adaptation has a significant influence on the performance of information technology projects in tier-one commercial banks.

Table 6: Regression Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.971	.251		7.868	.000
Continuous Adaptation	.537	.061	.664	8.744	.000

a. Dependent Variable: Performance of Information Technology Projects

Based on the coefficients, the linear regression model was expressed as: $Y = 1.971 + 0.537X_1 + 0.251$. The result implies that one-unit increase in continuous adaptation leads to a 0.537 unit improvement in performance of information technology projects among the tier one commercial banks. Further, the continuous adaptation the t-value was 8.744 with $p=0.000$, hence the relationship was significant at the 95% confidence level. In the rapidly evolving technological landscape of the banking sector, the ability to continuously learn, adjust, and refine processes is a defining factor for sustained success. Banks that embrace iterative improvement mechanisms and foster a culture of continuous learning are better positioned to anticipate changes and proactively address potential disruptions. As such, the continuous adaptation as a practice of agile project management affect the performance of information technology projects by tier one commercial banks.

6. CONCLUSION

The study concludes that continuous adaptation is a key determinant of project resilience and performance of information technology projects. By institutionalizing a culture of learning and improvement, organizations are better equipped to anticipate, absorb, and respond to changing technological and operational demands. Teams that embrace continuous improvement are able to refine processes, integrate innovative solutions, and maintain quality even under uncertain conditions. Adaptability also minimizes the negative impact of disruptions, ensuring continuity and alignment with emerging priorities. The continuous adaptation reinforces organizational agility, enabling IT projects to remain efficient and resilient.

7. RECOMMENDATION

The study recommends that tier-one banks embed continuous adaptation as a core aspect of agile project management within the context of information technology projects. This can be achieved through continuous learning, periodic process reviews, and innovation-driven project evaluation. Further, they should establish flexible systems that allow project teams to re-align strategies quickly in response to technological shifts, regulatory changes, or evolving user needs to attain and maintain sustainable performance of information technology projects.

REFERENCES

- Bachinger, F., Kronberger, G., & Affenzeller, M. (2021). Continuous improvement and adaptation of predictive models in smart manufacturing and model management. *IET Collaborative Intelligent Manufacturing*, 3(1), 48-63.
- Backlund, F., & Sundqvist, E. (2018). Continuous improvement: challenges for the project-based organization. *International Journal of Quality & Reliability Management*, 35(7), 1306-1320.
- Budhiraja, S., & Rathi, N. (2023). Continuous learning during crises: achieving change-efficacy, meaningful work and adaptive performance. *International Journal of Productivity and Performance Management*, 72(8), 2317-2334.
- Charo, F., & Gachengo, L. (2024). Capabilities for project management and the results of projects carried out by commercial banks in Nairobi City County, Kenya. Doctoral dissertation, Kenyatta University.
- Del Solar Serrano, P., del Río Merino, M., & Villoria Sáez, P. (2020). Methodology for continuous improvement projects in housing constructions. *Buildings*, 10(11), 199.
- Frank, L., & Mohamed, S. (2024). Continuous Learning and Adaptation: Fostering a Culture of Learning and Experimentation through the CR Model in Strategic Planning Processes.
- Hasgall, A., & Ahituv, N. (2021). Putting into practice ongoing technological innovation adaptation in intricately flexible organizations. *The Journal of High Technology Management Research*, 29(1), 35-45.

- Karani, I., Kariuki, N., & Osman, F. (2022). Monitoring adaptation and assessing progress in Kenya. International Institute for Environment and Development.
- Kontogianni, T., Gygli, M., Uijlings, J., & Ferrari, V. (2020). Continuous adaptation for interactive object segmentation by learning from corrections. In Computer Vision–ECCV 2020: 16th European Conference, Glasgow, UK, August 23–28, 2020, Proceedings, Part XVI 16 (pp. 579-596). Springer International Publishing.
- Maina, L. W. & Mungai, M. W. (2024). Project scope management and performance of information technology projects among Commercial Banks Nairobi City County, Kenya. *Int Journal of Social Sciences Management and Entrepreneurship*, 8(1), 628 -641
- Muhammad, U., Nazir, T., Muhammad, N., Maqsoom, A., Nawab, S., Fatima, S. T., & Butt, F. S. (2021). Impact of agile management on project performance: Evidence from IT sector of Pakistan. *PLoS One*, 16(4), e0249311.
- Muhinja, T.M. & Nyanga'u, S.P. (2021). Effect of information technology infrastructure on effective implementation of ICT Projects in Manufacturing Enterprises in Nakuru County, Kenya. *International Journal of Social Sciences*, 7 (2), 1-22.
- Muli, F., & Muchelule, Y. (2024). Agile project management strategies and performance of projects in real estate firms in Nairobi City County, Kenya. *International Journal of Social Sciences Management and Entrepreneurship (IJSSME)*, 8(1).
- Obonyo, C. O., & Muchelule, Y. (2024). Agile project management practices and performance of telecommunication infrastructure projects in Nairobi City County, Kenya. *International Journal of Social Sciences Management and Entrepreneurship (IJSSME)*, 8(2).
- Ohenoja, M., Koistinen, A., Hultgren, M., Remes, A., Kortelainen, J., Kaartinen, J. & Ruusunen, M. (2023). Continuous adaptation of a digital twin model for a pilot flotation plant. *Minerals Engineering*, 198, 108081.
- Okong'o, O. F. (2022). Risk Management and Performance of Information Technology Projects by Commercial Banks In Kenya (Doctoral dissertation, Kenyatta University).
- Ondiek, D. (2021). Influence of Digital Technology on the Perfomance of Kenya Commercial Bank (Doctoral dissertation, University of Nairobi).
- Raharjo, T., & Purwandari, B. (2020). Agile project management challenges and mapping solutions: A systematic literature review. In Proceedings of the 3rd International Conference on Software Engineering and Information Management (pp. 123-129).
- Rajan, E. R., & Santhosh, V. A. (2021). Adoption of agile methodology for improving IT project performance. *Serbian Journal of Management*, 16(2).
- Rangira, U. J., & Gathiru, M. K. (2023). Effect of adaptive planning on performance of construction projects in Rwanda. A case of cheetah construction services Ltd. *The Strategic Journal of Business & Change Management*, 10 (4), 1135 – 1150. <http://dx.doi.org/10.61426/sjbcm.v10i4.2809>
- Sapeta, P., Centeno, C., Belar, A., & Arantzamendi, M. (2022). Adaptation and continuous learning: integrative review of coping strategies of palliative care professionals. *Palliative medicine*, 36(1), 15-29.
- Seeton, K. A. (2022). The Impact of Agile Project Management on Productivity in IT Projects.
- Tanchaisak, K., & Niyomves, B. (2024). Agile Management: Mastering Change in Today's Dynamic Environment. In Modern Management Science Practices in the Age of AI (pp. 237-266). IGI Global.
- Žužek, T., Gosar, Ž., Kušar, J., & Berlec, T. (2020). Adopting agile project management practices in non-software SMEs: A case study of a Slovenian medium-sized manufacturing company. *Sustainability*, 12(21), 9245. <https://doi.org/10.3390/su12219245>