International Research Journal of Project Management

Vol 7, Issue 1, pp 1-4, May 13, 2025, © International Research Journal Publishers, ISSN 2710-2742 (online) www.irjp.org

Effect of Enterprise Resource Planning System on Project Performance in the Roads Sector in Kenya

Kianyaga Shem Momanyi[1*], Karaba Daniel[2], Dr. Kihiko Jack[3] & Dr. Gatobu Purity[4]

[1]Student of Master of Science in Project Management

[2]Lecturer at Jomo Kenyatta University of Agriculture and Technology, Kenya

[3]Lecturer at Karatina University, Kenya

[4]Lecturer at Jomo Kenyatta University of Agriculture and Technology, Kenya

Accepted, May 12th, 2025

Abstract

This study examines the effect of Enterprise Resource Planning (ERP) systems on project performance, with a focus on change management in the roads sector in Kenya. Using Kenya Urban Roads Authority (KURA) as a case study, the research evaluates how change management influences project efficiency, decision-making, and stakeholder satisfaction. Data was collected from 69 employees through structured questionnaires and analyzed using regression and correlation techniques. Findings reveal that change management significantly impacts project performance, explaining 20.7% of performance variations. The study recommends enhanced change management strategies to optimize ERP-driven project outcomes in public infrastructure sectors.

Keywords: *Change management, ERP systems, project performance, Kenya Urban Roads Authority (KURA), road infrastructure*

BACKGROUND OF THE STUDY

Enterprise Resource Planning (ERP) systems are critical in modern project management, offering integrated solutions for resource allocation, data management, and operational efficiency. However, even successful ERP implementations face significant challenges (Baccarini, 2009; Pinkerton, 2003). Research highlights the need to distinguish between project management success (time, budget, scope) and product success (system quality, business value) (Nelson, 2005). For complex ERP projects in infrastructure sectors, evaluations must prioritize long-term outcomes—such as process efficiency and stakeholder benefits—over short-term metrics (Shenhar et al., 2001).

In Kenya's roads sector, challenges like skills gaps, training deficiencies, and misaligned strategic goals (Umble & Umble, 2002) hinder ERP potential. At Kenya Urban Roads Authority (KURA), ERP adoption aims to enhance project performance, but its effectiveness depends on overcoming these barriers. This study investigates how change management, as a key ERP component, influences project outcomes, bridging the gap between technical implementation and organizational transformation.

Statement of the Problem

Even successful ERP implementations face significant challenges. Research highlights the need to distinguish between project management success and product success (Baccarini, 1999; Shenhar, Dvir, & Levy, 2001). ERP success should go beyond meeting time, budget, and scope requirements to include system quality, usage, and business value (DeLone & McLean, 2003). Studies emphasize that ERP projects, due to their complexity and uncertainty, should be evaluated based on long-term outcomes rather than short-term metrics (Shenhar et al., 2001). Common challenges include a lack of skilled personnel, inadequate training, mismatched expectations, and unclear strategic goals (Umble & Umble, 2002; Bradley & Lee, 2007). This study examines the effect of ERP systems on project performance at the Kenya Urban Roads Authority.

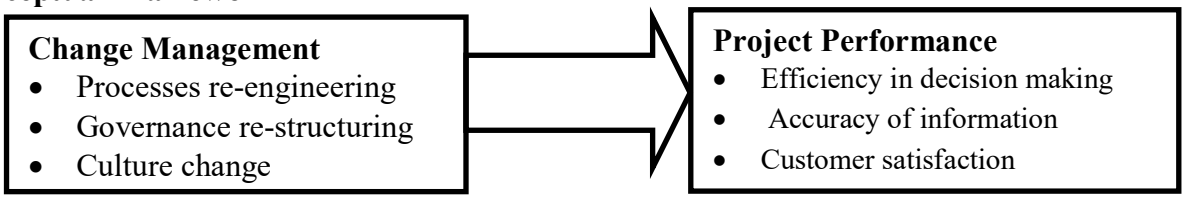
Specific Objective;

To determine the effect of change management on Project Performance in the Roads Sector in Kenya.

Theory Supporting the variable;

Lewin's Change Management Model and Project Performance in the Roads Sector in Kenya-Developed by Kurt Lewin in 1947, Lewin's Change Management Model provides a structured approach to organizational change through three key stages: Unfreeze, Change, and Refreeze (Lewin, 1947). In the context of Kenya's roads sector, particularly within agencies such as the Kenya Urban Roads Authority (KURA), this model offers a practical framework for improving project performance. The Unfreeze stage involves preparing the organization for change by identifying performance gaps, such as delays or budget overruns in road projects, and creating awareness among stakeholders. In the Change phase, new systems or processes—like Enterprise Resource Planning (ERP)—are introduced to streamline planning, data management, and risk tracking. This phase requires strong communication and training to reduce resistance and ensure adoption. The Refreeze stage solidifies these changes, integrating them into the organizational culture to ensure long-term impact. When properly applied, Lewin's model can enhance efficiency, accountability, and outcomes in road infrastructure projects in Kenya.

Conceptual Framework



Independent Variable **Dependent Variable**

Research Gap

Several related studies highlight challenges and success factors in ERP implementation. Allen and Kern (2001) found cultural and legal misfits in ERP adoption across regions, indicating that success in one context may not transfer to another. Bradley and Lee (2007) emphasized the importance of user training for ERP success, while Srivastava and Gips (2009) noted the lack of strategic focus and cross-functional collaboration. Munyendo (2011) stressed the role of top management support, and Cheboi (2010) highlighted ERP's role in linking departmental functions. Mugambi (2011) defined IFMIS as a tool for efficient financial management. These studies expose gaps that this research on ERP systems and project performance at Kenya Urban Roads Authority seeks to address.

RESEARCH METHODOLOGY

Research Design

A descriptive case study design was employed, targeting 69 KURA employees across departments (Finance, ICT, Project Management) (Yin, 2018)

Data Collection

Primary data was collected via questionnaires using a 5-point Likert scale. Variables included:

- Independent: Change management (training, communication, culture alignment).
- Dependent: Project performance (timeliness, budget adherence, stakeholder satisfaction).

Data Analysis

Pearson correlation and regression analysis were used to test relationships.

FINDINGS AND DISCUSSION

The study found that change management significantly influenced project performance in ERP implementation at the Kenya Urban Roads Authority. A key component of this was training and communication, where 74% of employees reported receiving ERP training, which contributed to improved system adoption and ease of use. Additionally, cultural alignment played a role, with 51.7% of respondents agreeing that ERP implementation helped clarify roles and responsibilities, thereby minimizing workflow disruptions.

Regression analysis confirmed a significant positive relationship between change management and project performance, with a beta coefficient of 0.481 ($p = 0.001$). However, the model explained only 20.7% of the variance in project performance ($R^2 = 0.207$), indicating that while change management is important, it is not the sole determinant of success.

This relatively low explanatory power suggests the presence of other influential factors such as leadership, funding, and organizational support. These findings are consistent with Hunton et al. (2003), who argue that ERP success depends on a combination of strategic, technical, and organizational factors, rather than a single dimension.

CONCLUSION AND RECOMMENDATIONS

Conclusion

Change management emerges as a critical driver of ERP success in Kenya Urban Roads Authority (KURA) projects, though its overall impact on project performance is moderate. For ERP systems to deliver sustained value, organizations must prioritize continuous staff training to enhance user competency, maintain transparent communication to reduce resistance and uncertainty, and foster adaptive organizational cultures that support change initiatives.

Recommendations

To enhance the effectiveness of ERP implementation in public infrastructure projects, several key actions are recommended. Firstly, policy makers should institutionalize structured change management frameworks across public sector projects. Doing so will create a consistent and strategic approach to managing transitions, thereby improving system adoption and long-term outcomes.

Secondly, the management of Kenya Urban Roads Authority (KURA) should prioritize investment in post-implementation ERP support. This includes ongoing technical support, continuous employee training, and meaningful engagement with all stakeholders to ensure the system remains relevant and effective as organizational needs evolve.

Lastly, future research should expand the scope of inquiry to include additional ERP success factors beyond change management. These may include leadership dynamics, organizational culture, and the role of external partnerships. Such exploration will contribute to a more

comprehensive understanding of the variables that drive ERP project success in the roads sector and beyond.

REFERENCES

Allen, D., & Kern, T. (2001). Enterprise resource planning implementation: A classification of misfits between ERP and organisational culture. Computers in Industry, 42(2–3), 201–219. https://doi.org/10.1016/S0166-3615(00)00083-0

Baccarini, D. (1999). The logical framework method for defining project success. Project Management Journal, 30(4), 25–32.

Balogun, J., & Hailey, V. H. (2008). Exploring strategic change. Pearson.

Bradley, J., & Lee, C. C. (2007). ERP training and user satisfaction: A case study. International Journal of Enterprise Information Systems, 3(4), 17–26.

Cheboi, S. (2010). The role of ERP systems in enhancing inter-departmental collaboration in public organizations in Kenya [Unpublished master's thesis, Kenyatta University].

Davenport, T. H. (2000). Mission critical: Realizing the promise of ERP systems. Harvard Business Press.

DeLone, W. H., & McLean, E. R. (2003). The DeLone and McLean model of information systems success: A ten-year update. Journal of Management Information Systems, 19(4), 9–30.

Kotter, J. P. (1996). Leading change. Harvard Business Review Press.

Markus, M. L., & Tanis, C. (2000). The enterprise systems experience. Journal of Information Technology, 15(4), 301–313.

Mugambi, E. M. (2011). Implementation of Integrated Financial Management Information System (IFMIS) and its impact on public sector financial management in Kenya [Unpublished master's thesis, University of Nairobi].

Munyendo, D. (2011). An assessment of top management support in the implementation of ERP systems in government institutions in Kenya [Master's thesis, University of Nairobi].

Shenhar, A. J., Dvir, D., & Levy, O. (2001). Project success: A multidimensional strategic concept. Long Range Planning, 34(6), 699–725.

Srivastava, S. C., & Gips, M. A. (2009). Strategic expectancy and ERP adoption: A conceptual model. Information Systems Frontiers, 11(3), 267–277. https://doi.org/10.1007/s10796-008-9085-4

Umble, E. J., & Umble, M. M. (2002). Avoiding ERP implementation failure. Industrial Management, 44(1), 25–33.