# Stakeholder Analysis and Readiness to Change on ERP Project Implementation

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**Abstract**
The successful implementation of Enterprise Resource Planning (ERP) systems in organizations heavily relies on effective change management strategies. The objective of the current study was to investigate the effect of stakeholder analysis and readiness for change on ERP Project Implementation. This study was guided by Stakeholder Theory and Lewin's Three-Step Change Theory. We employed a descriptive research design and conducted data analysis through both descriptive and inferential methods, including correlation and multiple regression. The study encompassed 732 REREC corporate staff in Nairobi, with a sample of 146 individuals selected via simple random sampling. Our findings reveal that change management success factors, specifically stakeholder analysis (r = 0.340; p < 0.01) and readiness for change (r = 0.237; p = 0.015), exhibit a statistically significant cause-and-effect relationship with ERP implementation. Among these relationships, stakeholder analysis holds the highest influence (r = 0.340), followed by readiness for change (r = 0.237). Effective change management strategies significantly effect ERP project success, with stakeholder analysis playing a substantial role and readiness for change being pivotal. Cultivating readiness for change is essential, fostering adaptability and confidence among employees through effective communication and training. Customized change management plans addressing unique stakeholder concerns should be developed and continuously monitored.
**Keywords:** Stakeholder Analysis, Readiness for Change, Critical Success Factors, ERP Implementation, Change Management
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## 1. Introduction

### 1.1 Background of the Study

Change is an inevitable aspect of a dynamic business environment, driven by shifting business priorities, market dynamics, digitization, technological disruptions, and evolving requirements (Mathar & Mithun, 2019). The implementation of Enterprise Resource Planning (ERP) projects often introduces significant changes within organizations (Flevian, 2018). To ensure these changes are smoothly integrated into an organization, effective change management focuses on both the process and people aspects (Mathar & Mithun, 2019). Successful ERP project management necessitates a strong emphasis on change management to address the organizational changes that arise after ERP adoption (Park, 2018). Change management strategies must be applied during ERP project system implementation to facilitate the integration of ERP projects in the workplace (Najm et al., 2018). Despite the extensive research on the ERP system's implementation phase, there are gaps in contextual and conceptual understanding, particularly in strengthening the critical success factors for change management in stakeholder analysis and organizational readiness (Divya & Mithun, 2020; Doan & Nguyen, 2020). As Sudevan et al. (2018) explain, stakeholders are individuals or groups within an organization who have a vested interest in the success of an ERP implementation software project. Their support is essential for launching and ensuring the full utilization of the project. Stakeholder analysis, as defined by Sreeram and Parimi (2018), involves gathering information on all parties affected by the project to identify their needs and preferences. This study assessed stakeholder analysis by identifying the needs of owners, concerns of customers, needs of employees, and environmental requirements. According to Holt et al. (2018), readiness for change refers to the extent to which individuals are psychologically and emotionally prepared to embrace and adopt a specific strategy for changing the status quo. This study measured readiness for change by evaluating business readiness plans, the business case for change, and resistance management plans.

### 1.1.1 ERP System Projects in State Corporations

State corporations are increasingly compelled to automate and utilize technology in response to the rapid pace of development and change. Maintaining a competitive edge requires comprehensive automation of all business aspects using an integrated, fully automated ERP system. ERP systems are widely adopted because they enable complete business process automation, with various functions such as sourcing, supply chain management, quality management, inventory, manufacturing, sales, distribution, and finance being seamlessly integrated into a single solution. The success of ERP implementations largely depends on the acceptance and utilization of the system by internal and external stakeholders. Therefore, well-defined methodologies and strategies for managing workplace changes are crucial. By utilizing established critical success factors for change management,

organizations can ensure the successful implementation of ERP systems.

### 1.1.2 ERP System Project in Rural Electrification and Renewable Energy Corporation (REREC)

REREC, formerly known as the Rural Electrification Authority (REA), is one of the seven Semi-Autonomous Agencies (SAGAs) that report to the Ministry of Energy (MoE). With its operations commencing in 2007, REREC aimed to automate the majority of its manual business processes to align with national priorities regarding energy security and development programs. This transformation was mandated by various presidential directives, emphasizing automation for increased transparency, efficiency, and integrity in government services.

### 1.2 Statement of the Problem

ERP project failures have been prevalent in government parastatals (Primeau & Leroux, 2019), with over 70% of ERP projects failing due to the lack of critical success factors in change management (Almajali et al., 2018). The 2016 ERP Report highlighted that only 10% of sampled ERP projects in 2015 were implemented on schedule, within budget, and as intended, while the majority faced delays, cost overruns, or abandonment (Panorama Consulting Solution Group, 2017). Subsequent reports also indicated a lack of focus on change management, with only a minority of projects giving it the attention it deserves (Panorama Consulting Solution Group, 2018, 2022). Despite extensive research on ERP project management, there remains a gap in understanding the depth and extent to which change management critical success factors influence ERP project outcomes, especially at the organizational level. This study seeks to address these gaps by providing comprehensive insights into the use of critical success factors for change management in ERP implementation.

### 1.3 Purpose of the Study

i. To assess the use of change management critical success factors in the ERP project at REREC.
ii. To determine the level of adoption of the Enterprise Resource Planning (ERP) system at REREC.
iii. To establish the effect of change management critical success factors on ERP project implementation at REREC.

### 1.4 Research Questions

i. What is the depth of utilization of change management critical success factors in ERP project implementation at REREC?
ii. What is the level of adoption of the Enterprise Resource Planning (ERP) system at REREC?
iii. How do change management critical success factors influence ERP project implementation at REREC?

## 2. Literature Review
### 2.1 Theoretical Framework
### 2.1.1 Stakeholder Theory

Stakeholder theory, as originally proposed by Milton Freeman, emphasizes the importance of accommodating various parties with an interest in an organization's activities (Gutterman, 2023). According to Freeman et al. (2018), a business can be seen as a network of interactions between parties, including managers, communities, customers, suppliers, employees, and financiers, all of whom jointly create value. This theory is relevant to understanding change management and ERP projects, as it underlines an organization's social responsibility to safeguard the interests of all stakeholders, beyond just investors. Stakeholders are critical in ERP implementations, as they effect the success and utilization of the project (Divya & Mithun, 2020). Furthermore, stakeholder assessments help in identifying and addressing the needs, interests, and relative power of these key actors, facilitating the successful implementation of ERP change management.

### 2.1.2 Lewin Three-Step Change Theory

Kurt Lewin's Three-Step Change theory, introduced in 1947, outlines three stages: unfreezing, changing, and refreezing (Burnes, 2020). Unfreezing involves making people understand the necessity for change, while the changing stage involves leading and motivating individuals to accept the change. The refreezing stage solidifies the change. This theory can effectively explain the critical success factors for change management, such as stakeholder analysis and readiness for change, within the context of ERP implementation.

### 2.2 General Literature

Stakeholders, defined as individuals or groups with vested interests in an ERP implementation, play a pivotal role in the success of such projects (Sudevan et al., 2018). Understanding and engaging with stakeholders are crucial for ERP change management, as they can effect the project's outcome. A comprehensive stakeholder analysis not only identifies key stakeholders but also their values, interests, and relative power, enabling better project planning and risk mitigation (Houti et al., 2018). Utilizing stakeholders as primary points of contact can enhance the effectiveness of ERP change management in any organization (Divya & Mithun, 2020; Kariuki, 2020; Githiga, 2018; Makori & Osebe, 2018).

Readiness for change, as defined by Holt et al. (2018), involves individuals' psychological and emotional preparedness to embrace a strategy for changing the status quo. Organizational readiness for change, as conceptualized by Weiner et al. (2020), focuses on the shared commitment and optimism of organizational members regarding their ability to implement change. Assessing readiness for change is essential in successful project management, as it can significantly influence the outcome of ERP implementations (Rahi et al., 2022; Caporarello & Viachka, 2018; Kachuchuru, 2021).

### 2.3 Empirical Literature

Studies have shown that employing evaluation strategies like the Theory of Change in projects helps project practitioners appreciate the value of stakeholder engagement in achieving socially desirable outcomes (Jiya, 2021). Identifying key change agents who possess influence, control, and a sphere of influence is vital for promoting change within an organization during ERP implementation (Divya & Mithun, 2020). Research has also highlighted the positive correlation between stakeholder analysis and change management (Terer et al., 2019), underscoring the importance of stakeholders in ERP project success. Employee readiness for change has been found to directly influence the intention to use ERP (Nguyen et al., 2022). Therefore, it is imperative for leaders and management to possess self-efficacy and flexibility to deal with change effectively (Rismansyah et al., 2022). An organization's readiness assessment is essential in minimizing ERP project failures, and research suggests that it is a critical factor in project management (Wijaya et al., 2020; Mugata & Muchelule, 2018). In conclusion, the literature demonstrates the critical importance of stakeholder analysis and readiness for change in the context of ERP project implementation. Understanding and effectively engaging with stakeholders and assessing readiness for change are key success factors that can significantly effect the outcome of ERP projects, particularly in state corporations like REREC.

Figure 1. Conceptual Framework
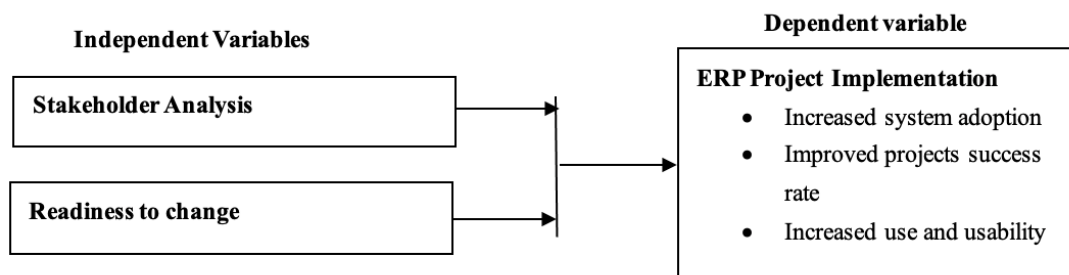


*Source: Kingori et al. (2023)*

### 3. Research Methodology

To investigate the influence of Change Management on the successful implementation of Enterprise Resource Planning (ERP) systems, this study employed a descriptive research design method. Descriptive research aims to ascertain and depict the characteristics of variables within a specific context (Gupta & Rangi, 2018). This methodology is commonly utilized in corporate settings to understand and describe attributes and characteristics of employees. It facilitates the examination of factors such as resistance to change and readiness for change. The primary data collection method employed in this study involved the use of structured questionnaires to gather information. The study's target population consisted of the employees of Rural Electrification and Renewable Energy Corporation (REREC) in Kenya. Specifically, the study focused on the 146 individuals occupying top and middle management positions within the organization. Given the manageable size of this population, a census approach was employed, ensuring that data was collected from every member. Additionally, a pre-test was conducted at Geothermal Development Company (GDC), an institution similar to REREC, and situated within the Ministry of Energy's purview, in a similar location. Fifteen respondents from GDC participated in the pre-test, serving as a validation of the questionnaire's effectiveness.

## 4. Data Analysis, Presentation and Interpretation
### 4.1 Inferential Statistics
*Table 1: Regression Analysis Results*

Coefficients a

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 0.004 | 0.175 | | 0.020 | 0.984 |
| | Stakeholder Analysis | 0.243 | 0.105 | 0.205 | 2.313 | 0.023 |
| | Readiness to Change | 0.187 | 0.064 | 0.239 | 2.924 | 0.004 |

a. Dependent Variable: implementation of ERP Systems

*Source: Kingori et al. (2023)*

The analysis rigorously examined the relationships between the independent variables (IVs) and the dependent variable (DV), as well as the interplay between the IVs, the moderating variable, and the DV. The analysis was conducted at a significance level (p-value) of 0.05, aiming to demonstrate that both stakeholder analysis (p=0.023) and readiness to change (p=0.004) exerted a notable influence on the implementation of ERP Systems, with p-values for each factor falling below the 0.05 threshold. These findings reveal that a one-unit increase in stakeholder analysis corresponds to a 0.243 unit increase in ERP Systems implementation, and similarly, a one-unit increase in readiness to change leads to an increase in ERP Systems implementation.

***In summary, the ultimate regression model can be expressed as follows:***

Implementation of ERP Systems = 0.004 + 0.243(stakeholder analysis) + 0.187(readiness to change) … (ii)

This regression model effectively encapsulates the relationships between stakeholder analysis, readiness to change, and the implementation of ERP Systems, elucidating the effect of these critical factors.

*Table 2: Model goodness of fit, Analysis of variance (ANOVA)*

ANOVAa

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 3.654 | 4 | .913 | 13.581 | .000b |
| | Residual | 6.659 | 99 | .067 | | |
| | Total | 10.313 | 103 | | | |

a. Dependent Variable: implementation of ERP Systems
b. Predictors: (Constant), Stakeholder Analysis, Readiness to Change

*Source: Kingori et al. (2023)*

The results demonstrate that the p-value, which equaled 0.05 (p<0.01), signifies that the regression model furnishes substantial evidence supporting the notion that Stakeholder Analysis and Readiness to Change serve as predictors of ERP Systems implementation. This statistical significance underscores the influential role played by Stakeholder Analysis and Readiness to Change in forecasting the successful implementation of ERP Systems.

*Table 3: Results on model summary*

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics R Square Change | F Change | df1 | df2 | Sig. F Change |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.595a | 0.3543 | 0.3282 | 0.25935 | 0.3543 | 13.581 | 4 | 99 | 0.000 |

a. Predictors: (Constant), Stakeholder Analysis, Readiness to Change

*Source: Kingori et al. (2023)*

In Model 1, the results indicate an $R^2$ value of 0.3543, signifying a 35.43% variance, illustrating that a combination of change management strategies, including communication and training strategies, contributes to a 35.43% alteration in ERP Systems implementation.

### 4.2 Summary of Key Findings
Significantly, Stakeholder Analysis exhibits a substantial effect on ERP implementation, with a unit increase in Stakeholder Analysis resulting in a 0.243 rate of improvement in ERP implementation. Similarly, Readiness to Change significantly influences ERP implementation, with a unit change in Readiness to Change leading to a 0.187 rate of change in ERP implementation.

## 5. Conclusion and recommendations
### 5.1 Conclusion
Aligned with the research objectives, this study concludes that critical change management factors, specifically Stakeholder Analysis and Readiness to Change, significantly affect ERP Systems implementation, contributing to a 35.43% effect. Stakeholder Analysis plays a crucial role in assessing the needs of owners, evaluating customer concerns, analyzing employee needs, and addressing environmental considerations during ERP implementation. Readiness to Change encompasses the preparation of business readiness plans and resistance management strategies.

### 5.2 Recommendations
Building upon the research findings and research objectives, it is recommended that organizations enhance their Stakeholder Analysis processes to include provisions for assessing owners' needs, evaluating customer concerns, analyzing employee requirements, and addressing environmental considerations. Additionally, organizations should revise their policies related to Readiness to Change, incorporating provisions for preparing business readiness plans and resistance management within every ERP implementation. It is imperative to focus on individual readiness for change. Furthermore, it is advisable to conduct similar studies in different industries and regions to enhance the generalizability of the findings. While the present study relied on primary data derived from participants' opinions, future research should consider using secondary data to validate these findings. Moreover, employing qualitative approaches in subsequent studies can address qualitative concerns that structured questionnaires may not fully capture.

The study's conclusions and recommendations support the broader development objectives of both the Millennium Development Goals and Kenya's Vision 2030. By prioritizing effective change management practices in ERP implementation, organizations can contribute to social and economic development, and environmental sustainability on both a national and global scale.

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