The Moderating Role of Staff User Acceptance on the Relationship between IT Alignment and Employee Performance

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***Abstract*—The purpose of this study was to empirically establish the moderating role of staff user acceptance on the relationship between IT alignment and employee performance at Umeme Limited. The study adopted a cross-sectional design. The authors employ hierarchical regression modelling to test hypotheses. Using proportionate simple random and sampling procedures, a sample of 165 respondents was drawn from selected employees of Umeme Limited (290 in number) of which a response rate of 100% percent was obtained. Multiple regression results indicate that Information Technology Alignment is a significant predictor of Employee Performance in UMEME Ltd (Beta = .534, p < 0.001). This implies that Information Technology Alignment explains 53.4% of the variance in Employee performance. When testing for the moderating role of staff user acceptance on the relationship between IT alignment and employee performance at Umeme Limited; the interaction term was positive and significant resulting in the hypothesis "staff user acceptance moderates the association between IT alignment and employee performance at Umeme Limited" being supported. The staff user acceptance of Umeme employees needs to be constantly monitored as any slack-off would seriously impact the organisation. This is one of the few studies that focus on testing the moderating effects of staff user acceptance on the relationship between IT Alignment and employee performance in the Service Sector in Uganda.**

***Index Terms*—Employee performance, Information Technology Alignment, moderator effects, Staff User Acceptance.**

I. INTRODUCTION

Information technology alignment (ITA) has been used by many organizations to reduce overheads, become more competitive, make better decisions, make it difficult for new entrants to enter the market, improve relationships with suppliers, and improve customer relations [1], [2]. However, misalignment of business strategy with IT can lead to many challenges. For example, failure to invest in appropriate IT hardware and software can prevent employees from completing their tasks effectively, failure to meet customer IT expectations can lead to lost customers, and failure to attract and retain talented employees can undermine the organization's ability to innovate and compete [1], [2].

A sustained decline in employee performance has been linked to misalignment of IT and employee performance. This is because IT can be a powerful tool for improving employee productivity and efficiency; however, if IT is not aligned with the organization's business strategy, it can be difficult for employees to use it effectively [1], [3]. The annual reports of Umeme Limited [4], [5], the Office of the Auditor General's consolidated findings [6], and Umeme's audited results indicate pressures on operational and financial performance in recent years that are consistent with organizational challenges in aligning IT, operations and strategy [4], [5], [6]. This suggests that the organization may be struggling to align its IT with its business strategy. The moderating role of staff user acceptance in the relationship between IT alignment and employee performance has not been adequately explored in the academic literature; recent empirical work on technology acceptance and employee intention-to-use (e.g., studies using UTAUT/TAM frameworks) highlights that acceptance factors (performance expectancy, effort expectancy, facilitating conditions) matter strongly for employees' uptake of digital tools, but there remain relatively few studies that test staff acceptance explicitly as a moderator between IT–business

alignment and employee outcomes [7], [8]. This study aims to fill this gap by investigating the relationship between IT alignment, employee performance, and staff user acceptance in Umeme Limited.

THEORETICAL UNDERPINNINGS

Theories that anchor this study comprise the Strategic Alignment Model (SAM), the Generic Alignment Framework, and the IT Engagement Model. The SAM, originally developed to broaden the range of strategic choices available to managers for achieving business–IT alignment, emphasizes the dynamic interrelationships between business strategy, IT strategy, organizational infrastructure, and IT infrastructure [9], [10]. Contemporary studies drawing on SAM highlight its continued relevance in explaining how organizations align IT capabilities with strategic priorities to enhance performance outcomes in dynamic environments [9]. The Generic Alignment Framework is useful in elucidating the complexity of alignment by emphasizing the essential elements that must be considered when an organization seeks to achieve alignment, as well as the interdependencies among those elements [11], [10]. Recent empirical work applying generic alignment perspectives shows that distinguishing among alignment dimensions and understanding their linkages remains critical for achieving sustainable organizational performance in digitally intensive contexts [11]. The IT Engagement Model focuses on the degree to which IT units are meaningfully involved in both long-term strategic objectives and short-term operational demands of the business. Recent research building on IT engagement concepts emphasizes that IT functions face persistent challenges in maintaining strategic focus while simultaneously responding to immediate business and customer needs, and that effective engagement is essential for ensuring continuous alignment between IT and business units [12], [13]. These perspectives reinforce the importance of IT engagement as a mechanism for sustaining alignment in organizations operating in rapidly changing environments.

II. LITERATURE REVIEW AND DEVELOPMENT OF HYPOTHESES

IT Alignment and Employee Performance

Organizations the world over have strived to ensure that Information Technology (IT) and business strategies are closely aligned. This emphasis has intensified as digital technologies have become central to organizational operations, competitiveness, and value creation across industries [9], [13]. The key to successful IT–business alignment lies in the creation of value at each stage of the organization's internal and external value chain processes. Such value is realized when IT investments support strategic objectives and enhance process efficiency, coordination, and decision-making [14], [11].

This value is generated through both technological capabilities and continuous process improvements. Contemporary organizations increasingly rely on IT to automate workflows, integrate functions, assimilate data, and deliver timely, real-time information that supports employee task execution and performance [10]. Consequently, effective IT alignment enables employees to collaborate across previously disconnected processes, thereby enhancing productivity, responsiveness, and overall performance. Recent studies emphasize that the ability of organizations to orchestrate interdependent processes through aligned IT resources acts as a key performance driver in digitally enabled work environments [13], [11].

H1: IT Alignment is positively associated with employee performance

Staff User Acceptance and Employee Performance

Several scholars have examined the impact of staff user acceptance of information technology on employee performance and have documented positive relationships between these variables. Empirical research indicates that employee acceptance of technology is foundational to effective technology implementation and plays a critical role in influencing task outcomes and work efficiency [15], [16]. Studies integrating UTAUT constructs into workplace contexts show that factors such as performance expectancy, effort expectancy, and facilitating conditions are associated with improved task performance and productivity in digitalized work environments [17]. Evidence also suggests that when organizations invest deliberately in initiatives that foster employee acceptance of IT systems, the likelihood of achieving higher workplace performance improves because employees are more willing to engage with, and derive benefit from, technology [16]. In essence, improved employee performance in technology rich settings increasingly depends on

sustained efforts to build positive user attitudes and perceptions toward IT alongside effective management support structures [18].

H2: Staff User Acceptance is positively associated with employee performance

The Moderator Role of Staff User Acceptance in the IT Alignment

A growing body of recent research finds that when employees embrace new technologies, their job performance improves. For example, Duan et al. [19] show that using digital tools enhances job performance through improved coordination, communication, knowledge sharing, and decision-making. Conversely, studies warn that neglecting employee buy-in can doom even well-designed IT initiatives. One review notes that digital transformation projects often fail largely due to employee resistance, and another emphasizes that "without taking into account the human factor, even the best technology can fail." In short, technology can only boost performance if staff actually accept, trust, and competently use it.

Organizations that achieve high levels of user acceptance tend to run more efficient and agile operations. Positive attitudes toward workplace IT make work tasks smoother and more reliable. Nesporová and Gyurák Babeľová [20] find that a positive perception of new technology is associated with better task management, higher efficiency, and greater control over work. They also note that firms can "look for ways to use technology to simplify work and support team performance," leading to lower turnover and higher employee satisfaction. In practice, then, employee readiness and acceptance of digital tools translate into more efficient operations and stronger competitive positioning.

Recent meta-analyses highlight that the strength of the acceptance–performance link depends on context. For example, Marikyan et al. [21] report "inconsistencies and contextual variations in the strength and direction of [technology acceptance] relationships," meaning the impact of acceptance can differ by industry, country, or firm size. This suggests that researchers should study user acceptance not just as a standalone predictor of performance but also as a factor that can amplify or dampen the benefits of aligned IT strategies in different settings

H3: Staff User Acceptance moderates the association between IT alignment and employee performance

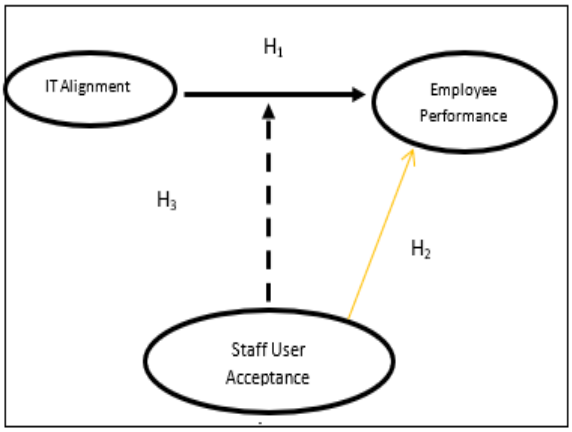

Figure 1: The IT Alignment – Staff User Acceptance - Employee Performance Model

III. METHODOLOGY

Research Design and Participants

The study adopted a cross-sectional design, which allowed the researcher to compare different population groups at a single point in time. This enabled the study to receive the views of different respondents in Umeme Limited, in terms of age, gender, income, education, and hierarchical level, in relation to the strategic business technology alignment and employee performance in Umeme Limited. The population of the study was 290 respondents from the Procurement Unit, Stores, Finance & Administration, Board Members, Directors, Other Departmental Heads, other employees, Prequalified Service Providers, and Contracts Committee members. The researcher used proportionate simple random sampling to determine the sample size, following the guidelines of Krejcie and Morgan [22].

Measures

IT Alignment (ITA) was measured according to Asiimwe, Kasekende, and Bada [23], who conceptualized IT alignment in terms of IT governance, IT implementation, and IT investment as key dimensions that drive organizational performance outcomes. Employee Performance was measured using a multidimensional performance measurement framework that captures collaboration, decision making quality, and overall performance effectiveness, consistent with contemporary performance measurement research [24]. Staff User Acceptance was assessed using constructs from the Unified Theory of Acceptance and Use of Technology

(UTAUT), including performance expectancy, effort expectancy, social influence, and facilitating conditions, reflecting validated measures of user acceptance in organizational contexts [25].

Common Methods Variance and Multicollinearity

To test the assumption of homogeneity of variance, Levene's test was utilised. The purpose of Levene's test was to assess if the study variables have equal variances. Levene's test certified the equality of variances in the samples (homogeneity of variances) $p > 0.05$ for IT Governance, Integration IT, IT Implementation, and Operating Environment. Only in the case of IT Investment; $p > 0.05$. Overall, the data set passed the homogeneity of variance. To test the assumption of multicollinearity, the researcher established VIF and Condition indices. Variable Inflation Factors (VIF < 3) indicated an absence of multicollinearity. Tolerance levels were acceptable as they ranged between 0 and 1. A condition index showed all predictor variables were < 30.

Tests of Factorability, Validity and Reliability

Validity was determined using Content Validity Index (CVI). The CVI for the questionnaire was valid at above 0.70 because average CVI was 0.868. Reliability was determined through the interpretation of Cronbach's alpha, which was 0.940 on average considering all the variables considered in the study. Bartlett and Kaiser-Meyer-Olkin (KMO) test of sphericity of Information Technology Alignment was 0.862; all the three factors of IT Alignment (Information Technology governance, Information Technology implementation and Information Technology investment) explained 64.487% of the variation in Information Technology Alignment. The results of tests of factorability demonstrate that indeed among electricity providers in Uganda, IT alignment practices is a multidimensional concept with three factors namely, Information Technology governance, Information Technology implementation, and Information Technology investment. However, the Exploratory Factor Analysis results eliminated information technology integration of activities as measure of Information Technology Alignment, therefore this study did not test the association between the information technology integration of activities and Employee Performance.

Descriptive Statistics and Correlation Analysis

Respondents largely agreed with statements on IT Alignment supported by a mean score of 4.01 and a standard deviation of 0.810 indicates positive skewness. On the other hand, statements of organizational climate scored a mean score of 3.00 indicating indecision, and a standard deviation of 1.123 indicating a wide range of responses. Correlation results indicate that information technology alignment and employee performance are positively and significantly correlated ($r = .534$, $p < 0.01$). This implies that positive changes that occur in ITA are associated with positive changes that occur in employee performance. Alternatively, this means that a change of 1 Standard Deviation in information technology alignment is associated with a change of 0.534 Standard deviations noted in employee performance. This indicates that hypothesis 2 has been supported.

IV. RESULTS

Multiple regression results indicate that Information Technology Alignment is a significant predictor of Employee Performance in Umeme ltd (Beta = .534, $p < 0.001$). This implies that Information Technology Alignment explains 53.4% of the variance in Employee performance. This implies that other variables that are not part of this study explain the remaining 45.7%. These results further support the correlation analysis results above that hypothesis 2 of this study has been supported.

Fredrich (1982) cited in Paine (2013) states that in instances where two or more variables predict an independent variable, the study must suspect an interaction moderation effect. To test for this moderation, the study conducted a hierarchical regression. Results indicate that the predictive potential of the independent variables on the dependent variable increased from 27.6% in the first model (adjusted $R2=.276$, $p<0.01$); to 28.3% in the second model (adjusted $r2 =.283$, $p<.001$) to ultimately 31.0% in model 3 (adjusted $r2=.310$, $p<0.05$). Furthermore, in model 3c Information Technology Alignment appeared a positive and significant predictor of employee performance (beta=.461, $p< 0.001$). Also, staff user acceptance appeared a positive and Significant predictor of employee performance (beta.196, $p<0.001$). Additionally, in the 3c model, the interaction term (ITA*SUA) appeared a significant predictor of employee performance (Beta=.196, $p<0.05$). Since the

interaction term is Significant and the Adj. R2 varies at an increasing rate, this means the hypothesis that states H3 "Staff user acceptance moderates the association between IT alignment and employee performance at Umeme Limited" staff user acceptance is supported.

V. DISCUSSION

The results indicate a positive and significant relationship between IT alignment and employee performance, implying that improvements in IT alignment lead to corresponding improvements in employee performance. These findings are consistent with recent empirical and meta-analytic evidence demonstrating that effective alignment between IT strategy and business objectives enhances coordination, decision-making, and operational effectiveness, which ultimately translate into improved employee outcomes [9], [11].

Contemporary alignment research emphasizes that IT alignment provides a structured mechanism through which organizations can integrate internal processes with strategic goals, enabling employees to work more collaboratively and efficiently. Recent studies further suggest that when IT is aligned to both operational and strategic needs, organizations experience greater agility and responsiveness, which positively affects employee productivity and performance [10], [3].

Efforts to elevate IT alignment beyond a purely technical support function to a strategic enabler of business value have been shown to contribute to competitive advantage and superior organizational performance. Empirical evidence from emerging and service-oriented economies indicates that firms that manage IT investments in line with strategic priorities achieve improved service quality, operational efficiency, and employee effectiveness [2], [1].

The findings of this study are also consistent with organizational evidence indicating that alignment-related challenges can negatively affect operational performance. Reports from the Office of the Auditor General (Uganda) [6] and Umeme Limited's recent annual reports highlight ongoing performance pressures that underscore the importance of strengthening alignment between IT systems and business processes to support employee effectiveness and service delivery [4], [5]. In addition, recent literature underscores that alignment alone may not be sufficient to generate performance gains unless employees actively accept and use the aligned IT systems. Studies on digital transformation and technology acceptance indicate that employee engagement with IT systems is a critical mechanism through which alignment translates into performance outcomes [7], [19]. This reinforces the argument that IT alignment enhances employee performance most effectively when supported by strong user acceptance and appropriate managerial practices [9], [10].

The results from the moderated model showed that ITA and SUA were both true predictors of employee performance. The multiplicative term (ITA*SUA) in the regression model was significant, which supports H3, which states that there is an interaction effect of ITA and SUA on employee performance. These results indicate that ITA and SUA have a positive effect on employee performance, and the assumption of non-additivity is met. This suggests that the contribution of ITA is dependent on the contribution of SUA in promoting employee performance. This finding supports the assertion that ITA elements, such as information technology governance, information technology implementation, and information technology investment, require an organizational climate to beget efficacy in employee performance.

Theoretical Implications

The Generic Alignment Framework is useful in elucidating the complexity of alignment by emphasizing the essential elements that must be considered when an organization seeks to achieve alignment, as well as the interdependencies among those elements [1], [10]. Recent empirical work applying alignment perspectives shows that distinguishing among alignment dimensions and understanding their linkages remains critical for achieving sustainable organizational performance in digitally intensive contexts [1], [10].

The IT Engagement Model focuses on the degree to which IT functions are meaningfully involved in both long term strategic objectives and short term operational demands. Research emphasizing IT engagement highlights that IT units face persistent challenges in maintaining strategic focus while simultaneously responding to current business and customer needs, and that effective engagement is essential for ensuring continuous alignment between IT and business units [12], [2]. These perspectives

collectively reinforce the importance of IT engagement as a mechanism for sustaining alignment in organizations operating in rapidly changing environments.

Methodological Implications

The study employed a cross-sectional research design to provide answers to the formulated hypotheses. It also used both qualitative and quantitative approaches (triangulation) to data collection and analysis [28]. The triangulation approach, which merges and integrates findings from different data collection tools (questionnaires and interview guides), was adopted. This approach aligns with contemporary methodological research emphasizing that reliance on a single data source may introduce systematic bias and limit the robustness of findings, whereas the use of multiple methods enhances analytical rigor [29].

Integrating findings from multiple sources strengthens the credibility and weight of research outcomes by allowing convergence and corroboration of evidence across methods. Recent methodological work argues that triangulation, achieved through deliberate integration of quantitative and qualitative approaches, improves the credibility, trustworthiness, and explanatory power of research findings [30]. The study's findings therefore make a meaningful contribution to the existing literature through the application of a triangulation approach, accomplished via the complementary use of quantitative and qualitative methods in data collection and analysis. Overall, triangulation enhances the validity and reliability of research instruments deployed in field studies, a conclusion that is strongly supported by established mixed-methods scholarship [28], [29].

Policy and Managerial Implications

The study found a positive and significant relationship between IT alignment and employee performance. This means that positive changes in IT alignment lead to positive changes in employee performance. This finding has a number of policy and managerial implications.

Policy implications

Umeme should adopt policies that can better complement key elements in IT alignment that boost employee performance. Such policies include increased training and designing updated alignment plans. These policies will help to ensure that employees are properly trained on how to use IT systems and that the IT systems are aligned with the company's business goals.

Managerial implications

Management can be more supportive by faster implementation, closer supervision, and monitoring of key tenets in IT alignment at Umeme Limited to result in improved employee performance. This means that management should ensure that IT projects are implemented on time and within budget and that employees are properly supervised and monitored when using IT systems.

The study also found that ITA and SUA positively impact employee performance. This means that policies that improve SUA will also help to improve employee performance. SUA can be improved by implementing policies such as suggestion boxes and regular symposiums and workshops. These policies will help to ensure that employees are more amenable to accepting new technologies, hardware, and software.

Management can also play a role in improving SUA by ensuring that resources are adequately allocated and policies are duly and diligently implemented. This means that management should provide employees with the training and resources they need to use IT systems effectively, and they should also ensure that policies are implemented in a way that is fair and equitable.

VI. CONCLUSION

The researcher hypothesized that IT alignment is positively related to employee performance in Umeme Limited. The study found that there is a positive and significant relationship between IT alignment and employee performance. This means that positive changes in IT alignment lead to positive changes in employee performance.

The study also found that staff user acceptance moderates the association between IT alignment and employee performance. This means that the relationship between IT alignment and employee performance is stronger when staff user acceptance is high.

The study concludes that achieving a good balance between IT alignment and staff user acceptance results in improvements in employee performance. This balanced alignment is thus recommended to Uganda's

service sector entities like Umeme as a good way forward.

Based on the results from the moderated model, the study concludes that ITA was a true predictor of employee performance. This means that ITA is a significant factor that contributes to employee performance, even when other factors such as staff user acceptance are taken into account.

Limitations

The researcher encountered a number of limitations during the study. The study being cross-sectional by design directly resulted in a number of limitations. A case in point is, information that took place in the past was not being captured because this requires using a longitudinal approach. Further, some of the targeted population exhibited some indifference, apathy, and lack of willingness to respond to the questionnaires.

Recommendations of the Study

Improve IT alignment. The study found that there is a positive and significant relationship between IT alignment and employee performance. This means that improvements in IT alignment are likely to lead to improved employee performance. The study recommends that Umeme Limited take deliberate steps to improve IT alignment, such as by increasing financial and human resource allocations to IT projects.

Increase staff user acceptance. The study also found that staff user acceptance positively impacts employee performance. This means that increasing staff user acceptance of IT systems is also likely to lead to improved employee performance. The study recommends that Umeme Limited make policy changes that support staff user acceptance, such as by providing training on the latest technologies and regularly procuring the latest hardware and software

ACKNOWLEDGMENT

My special thanks go to the management and staff of Umeme, Uganda, Nkumba University management and Staff, Staff from University of Kisubi and my supervisors Prof. Francis Kasekende and Prof. Joseph Bada, I am grateful for their time and cooperation.

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