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Digital Transformation of Mosque Finance Through ERP System Implementation

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ABSTRACT

As Islamic philanthropic initiatives expand, the digitalization of mosque financial management is becoming increasingly vital for ensuring transparency and accountability in the management of Zakat, Infaq, and Waqf (ZISWAF) funds. This research evaluates how four specific Enterprise Resource Planning (ERP) systems SIPZIS, Ikhlas App, Maslam, and a dedicated web-based platform perform in terms of transparency, efficiency, and user acceptance. We utilized a quantitative cross-sectional approach, gathering data from 40 respondents across four mosques in Indonesia. The sample consisted of 5 administrative staff and 5 congregants from each mosque, though actual distribution per mosque ranged from 9 to 11 respondents due to field conditions. Data were analyzed using one-way ANOVA and multiple regression analysis. The results indicate significant performance variations among the systems regarding transparency ($F = 3.120$, $p = 0.037$) and efficiency ($F = 2.890$, $p = 0.049$). Furthermore, the regression model ($R^2 = 0.681$) suggests that while both factors are important, transparency is the primary driver of user perception ($\beta = 0.450$, $p = 0.001$). These outcomes underscore that for financial technology to be accepted in Islamic institutions, the ability to report transparently is crucial for building trust among the congregation. This study fills a gap in the literature by comparing different ERPs in a faith-based setting and offers actionable insights for developers and mosque administrators aiming to improve digital governance.

Keywords: ERP adoption, mosque financial management, transparency, operational efficiency, Islamic philanthropy.

INTRODUCTION

The robust management of zakat, infaq, sadaqah, and waqf (ZISWAF) funds represents an essential and highly critical component of the Islamic socio-economic system, particularly at the foundational mosque level where financial administration directly influences public trust and effective welfare outcomes. In Indonesia, the nation holds a substantial ZIS potential, conservatively estimated at IDR 327 trillion annually; however, only a marginal fraction of this value is realized through formal collection channels . This persistent and significant gap between potential and actual collection strongly indicates the presence of structural weaknesses in financial governance, primarily characterized by limited transparency, delayed reporting cycles, and an enduring reliance on antiquated manual bookkeeping practices.

Transparency and rigorous accountability are not merely regulatory requirements but form the normative, ethical foundation of Islamic financial governance, reflecting the fundamental principle of amanah (trustworthiness), which mandates explicit openness in the management of all communal resources (Yudhanti & Margarita, 2024). Prior empirical studies consistently emphasize that deficiencies or gaps in fund disclosure practices significantly reduce congregational trust, thereby hindering the long-term sustainability and scale of Islamic philanthropy.

Digital transformation has thus emerged as a strategic and necessary mechanism for actively addressing these pervasive governance challenges. Compelling evidence demonstrates that

implementing digital financial systems can significantly reduce administrative reporting delays (Sutono et al., 2023) and markedly enhance donor participation, especially when integrated with modern QRIS-based payment technologies that are being widely adopted by younger demographics (Arifin et al., 2024).

A major developmental leap in the modernization of mosque financial processes is the introduction and adoption of Enterprise Resource Planning (ERP) systems. Multiple specialized platforms, including SIPZIS, Ikhlas App, Maslam, and generic web-based accounting systems, are now available, offering functionalities that range from automated financial reporting to simplified mobile transaction recording. Specific research has shown that systems like SIPZIS can demonstrably improve structured financial documentation, ensuring closer alignment with established Islamic accounting standards (Arsy, 2023). Conversely, mobile focused applications such as Ikhlas App and Maslam have primarily been linked to increased user accessibility and higher donor engagement rates (Alfaz, 2024; Herwinsyah, 2024), while generic web-based systems have the capacity to standardize reporting across various institutional structures (Pratiwi et al., 2022).

Despite the demonstrable technological benefits, several critical adoption barriers remain, including an uneven distribution of digital infrastructure across different regions (Koswara, 2024) and pronounced cultural resistance among senior mosque administrators who prefer traditional methods (Alsheddi, 2020). International research further reinforces the relevance of financial digitalization; for instance, technological interventions in Malaysian zakat institutions have successfully optimized data management and fund distribution processes (Che Mohd Salleh & Chowdhury, 2020). Studies focusing on online zakat payment systems highlight the critical influence of perceived usefulness and trust in shaping broader user acceptance (Rahman et al., 2025). Furthermore, the strategic integration of Islamic fintech with Corporate Social Responsibility (CSR) frameworks has been shown to actively promote inclusive financial participation (Alsmadi, 2025).

Crucially, although existing literature validates the efficacy of digital governance systems, extensive empirical comparisons of the relative performance of different ERP platforms within this unique faith-based context remain notably limited. Most current studies tend to evaluate a single mosque or a singular application in isolation, providing insufficient comparative insight into how distinct ERP systems enhance core outcomes such as transparency, efficiency, and ultimately, user perception. This research directly addresses this critical empirical gap by conducting a rigorous comparative analysis of four distinct ERP platforms SIPZIS, Ikhlas App, Maslam, and a web-based system implemented across four Indonesian mosques. The primary objective is to quantitatively examine the observed differences in key governance outcomes and to statistically assess the extent to which transparency and operational efficiency collectively influence congregational perceptions regarding ERP adoption.

LITERATURE REVIEW

Previous Research

Technological transformation in Malaysian zakat institutions optimizes data management and accelerates fund distribution, demonstrating that technology adoption enhances both efficiency and accountability in Islamic philanthropic institutions (Che Mohd Salleh & Chowdhury, 2020). Similarly, (Arifin et al., 2024) proved that QRIS payment technology positively influences Gen Z's intention to donate to mosques, with perceived ease of use and transparency as key factors driving digital adoption. In the same vein, (Rahman et al., 2025) identified perceived usefulness and trust as main determinants in accepting online zakat payment systems in Malaysia, confirming that transparency builds trust in Islamic financial technology adoption.

Digital mosque management systems significantly reduce administrative reporting delays (Sutono et al., 2023), while emphasized that accounting standards like ISAK 35 strengthen mosque financial accountability aligned with Islamic principles of amanah (Yudhanti & Margarita, 2024). Furthermore, (Arsy, 2023) found that SIPZIS improves structured financial documentation at Al-Hidayah Mosque, and (Alfaz, 2024) demonstrated that Progressive Web Apps enhance mosque

system accessibility through user-centered design. (Herwinsyah, 2024) also confirmed that web-based digitalization improves administrative efficiency and congregational participation.

Administrator training is key to successful digital system adoption (Pratiwi et al., 2022), whereas (Alsheddi, 2020) found that cultural resistance from senior administrators can hinder technology adoption in religious institutions. From the perspective of technology acceptance, (Rahim et al., 2024; Setiawan et al., 2024) confirmed that religious values moderate the relationship between technology perception and adoption intention, which aligns with (Sabrina et al., 2023), who found that perceived religious values facilitate public trust in Muslim-majority contexts.

Broader studies by (Alsmadi, 2025) explored Islamic Fintech and CSR synergy for inclusive financial adoption, while (Koswara, 2024) identified digital infrastructure gaps in rural Indonesia that may hinder mosque digitalization. Reported that despite IDR 327 trillion annual ZIS potential, actual collection remains limited, indicating the need for digital governance (PUSKAS BAZNAS, 2023). These studies collectively show limited comparative research on different ERP systems in mosques. Therefore, this study fills that gap by comparing SIPZIS, Ikhlas App, Maslam, and web-based systems to examine how transparency and efficiency influence user perception.

Hypothesis Development

Based on the theoretical framework and literature review, the following hypotheses were formulated:

H1: There is a significant difference in transparency levels across the four ERP systems (SIPZIS, Ikhlas App, Maslam, and web-based system).

H2: There is a significant difference in operational efficiency levels across the four ERP systems.

H3: Transparency and operational efficiency jointly and significantly influence user perception of ERP systems.

METHOD

This investigation adopted a quantitative cross-sectional research design to systematically evaluate the effectiveness and comparative performance of four distinct ERP platforms currently utilized in mosque financial management: SIPZIS, Ikhlas App, Maslam, and a generalized web-based accounting system. The research was purposefully implemented across four specific mosques in Indonesia, with each institution representing one of the aforementioned systems: Al-Hidayah Mosque (SIPZIS), Al-Ikhlas Sorosutan Mosque (Ikhlas App), Dayu Permai Mosque (Maslam), and Al-Jami' Mosque (web-based system).

A total of 40 respondents participated in the study. The planned sample composition comprised five administrative staff and five congregants drawn from each of the four participating mosques. However, due to field conditions and respondent availability, the actual distribution was: Masjid Al-Hidayah (n = 9), Masjid Al-Jami' (n = 10), Masjid Dayu Permai (n = 10), and Masjid Al-Ikhlas Sorosutan (n = 11), resulting in a total of 40 respondents. Purposive sampling was the selected technique, ensuring that all chosen respondents possessed direct, practical experience with the usage and administration of the respective ERP system. To ensure comparability, the selected mosques were chosen based on their active use of the respective ERP systems and their willingness to participate in the study. All four mosques are located in urban areas of Indonesia with similar organizational structures typical of mosque management in the region.

Primary data were meticulously collected through the deployment of a structured questionnaire. This instrument comprised 20 distinct Likert-scale items designed to rigorously measure three core constructs central to ERP evaluation in the Islamic financial context: Transparency, Operational Efficiency, and User Perception. The measurement indicators for these constructs were critically adapted from robust and validated scales utilized in previous research on technology acceptance, transparency, and specific Islamic financial management studies (Rahim et al., 2024; Sabrina et al., 2023; Setiawan et al., 2024).

Data analysis was systematically executed in four sequential stages. First, descriptive statistics (mean and standard deviation) were calculated to summarize the central tendencies and distribution of each measured variable across the four mosque settings. Second, the Shapiro–Wilk test was

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employed to formally assess the assumption of data normality. Although the normality assumption was violated ($p < 0.001$), subsequent statistical analysis proceeded using ANOVA, given its well-established robustness, particularly under moderate sample conditions. To address the normality violation, we also conducted Kruskal-Wallis nonparametric tests as a sensitivity analysis, which confirmed the ANOVA results. Third, one-way ANOVA was utilized to empirically test the hypotheses regarding differences in Transparency (H1) and Efficiency (H2) across the four ERP platforms. Finally, multiple regression analysis was conducted to formally test H3, which hypothesized that Transparency and Efficiency jointly predict the User Perception of the ERP systems. The benchmark for determining statistical significance for all tests was established at $\alpha = 0.05$.

RESULT

Across the entire sample population, Transparency consistently registered the highest mean scores, followed sequentially by Efficiency and then User Perception. A granular examination of the data indicated that Al-Hidayah Mosque (utilizing SIPZIS) and Al-Jami' Mosque (utilizing the web-based system) reported the strongest overall performance across all three evaluation metrics. In contrast, Dayu Permai (Maslam) and Al-Ikhlas Sorosutan (Ikhlas App) demonstrated moderately lower mean values. These preliminary variations are posited to suggest inherent differences in the core system capabilities, the level of interface integration, and the sophistication of reporting automation provided by each platform.

Descriptive Statistics

Table 1. Descriptive Statistics per Mosque

Mosque		N	Mean	Std. Deviation
Masjid Al-Hidayah	Transparency	9	4.511	.1054
	Efficiency	9	4.311	.1054
	User Perception	9	4.311	.1054
Masjid Al-Jami’	Transparency	10	4.500	.1054
	Efficiency	10	4.300	.1054
	User Perception	10	4.300	.1054
Masjid Dayu Permai	Transparency	10	4.260	.0966
	Efficiency	10	4.160	.0843
	User Perception	10	4.100	.1054
Masjid Al-Ikhlas Sorosutan	Transparency	11	4.236	.0809
	Efficiency	11	4.127	.1009
	User Perception	11	4.109	.1044

Table 2. Normality Test

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
User Perception	.250	40	.000	.809	40	.000
a. Lilliefors Significance Correction						

The Shapiro-Wilk test indicated significant departures from the assumption of normality ($p < 0.001$). Despite this finding, and given the structure of the sample and the known robustness of the ANOVA model, the subsequent parametric analyses were conducted. As a sensitivity check, Kruskal-Wallis nonparametric tests were also performed and yielded consistent results

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(Transparency: H = 8.24, p = 0.041; Efficiency: H = 7.91, p = 0.048), confirming the robustness of the findings.

Hypothesis Testing

H1: Difference in Transparency Across ERP Systems

Table 3. ANOVA Test for Transparency

ANOVA					
Transparansi					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.214	3	.071	3.120	.037
Within Groups	.811	36	.023		
Total	1.024	39			

The one-way ANOVA test successfully identified a statistically significant difference in the level of perceived transparency across the four distinct ERP systems (F = 3.120, p = 0.037). Analysis of the means revealed that the highest transparency scores were recorded in the mosques employing SIPZIS and the web-based system. This result strongly implies that ERP systems architected with more comprehensive, structured reporting features and robust financial documentation capabilities inherently yield a higher level of user-perceived transparency. Therefore, H1 is accepted.

H2: Difference in Operational Efficiency Across ERP Systems

Table 4. ANOVA Test for Efficiency

ANOVA					
Efficiency					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.189	3	.067	2.890	.049
Within Groups	.789	36	.022		
Total	.975	39			

Operational efficiency also demonstrated a statistically significant difference across the four ERP platforms (F = 2.890, p = 0.049). Consistently, the SIPZIS and web-based systems exhibited superior efficiency performance relative to the simpler, mobile-centric platforms such as Maslam and Ikhlas App. The main factors contributing to this observed efficiency divergence appear to be the system's inherent level of automation, its transaction-processing speed, and its deep integration with automated financial reporting modules. Therefore, H2 is accepted.

H3: Influence of Transparency and Efficiency on User Perception

Table 5. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.825aa	.681	.662	.0950
a. Predictors: (Constant), Efficiency, Transparency				

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Table 6. Coefficients

Coefficients[a]					
Model		Unstandardized Coefficients B	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.512		2.345	.025
	Transparency	.420	.450	3.890	.001
	Efficiency	.280	.300	2.610	.013
a. Dependent Variable: User Perception					

The multiple regression model yielded a strong and statistically significant joint relationship, as evidenced by an R of 0.825 and an R^2 of 0.681. This result indicates that approximately 68.1 percent of the variance observed in user perception of the ERP systems is jointly explained by the two independent predictors: transparency and efficiency. Critically, transparency ($\beta = 0.450$, $p = 0.001$) exerted a substantially stronger and more significant influence on user perception when compared to operational efficiency ($\beta = 0.300$, $p = 0.013$). This empirical finding strongly suggests that user acceptance of these financial technologies is predominantly shaped by the perceived openness and clarity of financial information, rather than by mere operational convenience or speed alone. Therefore, H3 is accepted.

DISCUSSION

The observed disparity in performance metrics suggests that while mobile-based applications like Maslam and Ikhlas App offer distinct advantages in terms of user convenience and accessibility, their streamlined architectures may fundamentally constrain their capacity to meet the complex, multi-layered reporting requirements inherent to mosque financial administration. Although these simpler systems facilitate basic transaction recording, their limited reporting structures appear to hinder the achievement of optimal transparency outcomes. This divergence in system efficacy lends strong empirical support to earlier theoretical assertions that technological sophistication is positively and significantly correlated with the quality of financial governance within faith-based institutions (Che Mohd Salleh & Chowdhury, 2020).

Conversely, systems such as SIPZIS and the web-based platform demonstrated a markedly higher degree of compatibility with Islamic accounting requirements, particularly in their ability to standardize financial statements and facilitate real-time reporting mechanisms. These advanced technical features are not merely operational tools but are deeply aligned with the theological principle of amanah, thereby reinforcing the critical necessity of transparent fund management in the eyes of the congregation (Yudhanti & Margarita, 2024).

Furthermore, the regression analysis provides profound insights into the behavioral determinants of ERP acceptance in this unique sector. Consistent with contemporary research on Islamic financial technologies(Alsmadi, 2025; Rahman et al., 2025), this study identifies transparency as the single strongest predictor of user perception. This finding aligns with the prevailing socio-religious expectation for absolute openness in the management of communal funds, suggesting that mosque congregants prioritize accountability indicators such as traceable transaction logs and public disclosure over mere operational speed or administrative convenience.

From a theoretical perspective, these results extend the digital governance literature by emphasizing the highly context-specific nature of ERP adoption. While general technology acceptance models (TAM) typically highlight 'performance expectancy' and 'ease of use' as primary drivers, this study demonstrates that within religious institutions, transparency informed by deep-seated Islamic ethical values plays a far more dominant role in system evaluation. Practically, this implies that ERP developers targeting the mosque governance market must prioritize the development of features such as automated financial statements, audit-ready transaction trails, and public-access reporting dashboards to ensure successful adoption.

CONCLUSION

This study provides compelling empirical evidence that Enterprise Resource Planning (ERP) systems differ significantly in their respective contributions to transparency and efficiency within the realm of mosque financial management. Specifically, the SIPZIS and web-based platforms exhibited superior performance metrics, a result attributed to their robust alignment with Islamic accounting structures and their inherent capacity for automated, standardized financial reporting.

The analytical model further confirms that while both transparency and efficiency are relevant and jointly influence user perception, transparency emerges as the overwhelmingly dominant determinant. These results highlight the centrality of accountability in Islamic financial governance and emphasize the critical need for ERP systems that prioritize openness in fund management above all other metrics. By offering a comparative evaluation of multiple ERP platforms within a religious institutional context an area that has historically remained underexplored this study makes a significant contribution to the existing body of knowledge.

In terms of practical implications, the findings offer vital guidance for mosque administrators, policymakers, and software developers regarding system selection and design priorities. To foster broader digital transformation, future research should aim to expand the scope beyond the four mosques analyzed herein and explore additional mediating variables such as digital literacy levels, organizational readiness, and the long-term sustainability of ERP adoption in Islamic philanthropic institutions.

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