Research Article

DIGITALIZATION OF ZAKAT MANAGEMENT FOR ENHANCED TRANSPARENCY AND POVERTY ALLEVIATION A CASE STUDY OF BAZNAS INDONESIA

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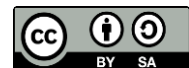Email: syukrawati82@gmail.com

Abstract

Traditional Zakat management often faces a significant institutional trust deficit, hindering its potential for poverty alleviation. The digitalization of Zakat, as exemplified by Indonesia's BAZNAS, presents a strategic solution, yet its empirical impact on transparency and social outcomes is under-evaluated. This research aims to empirically evaluate the impact of BAZNAS's digitalization strategy on enhancing institutional transparency, rebuilding stakeholder trust, and improving the effectiveness of poverty alleviation programs. A mixed-methods explanatory sequential case study of BAZNAS was employed. The study analyzed longitudinal institutional data (2018-2024), structured surveys (n=1000 muzakki and mustahik), and 55 semi-structured stakeholder interviews. Findings reveal a profound positive impact: Zakat collection increased by 153.1% and fund distribution time decreased by 72.3%. 'Perceived Transparency' ($\beta = .55$, $p < .001$) was confirmed as the strongest predictor of 'Institutional Trust'. A statistically significant reduction in mustahik poverty scores was also observed ($p < .001$). However, a critical 'Digital Access Gap' affecting 22% of recipients was identified. Digitalization is empirically validated as a powerful tool for resolving the institutional trust deficit and enhancing Zakat's effectiveness in poverty reduction. This success is, however, contingent upon developing hybrid strategies to address the digital divide and ensure inclusivity.

Keywords: BAZNAS Indonesia, Digitalization, Zakat Management

INTRODUCTION

Zakat stands as a fundamental pillar of Islamic economics, functioning not merely as an act of obligatory charity but as a comprehensive socio-economic institution designed for wealth redistribution and systemic poverty alleviation (Mahjoubi et al., 2025). Its institutionalization within Muslim-majority nations aims to formalize this process, creating a structured mechanism to bridge the gap between affluent muzakki (Zakat payers) and economically vulnerable mustahik (recipients) (Colbourne et al., 2024; Khanchel et al., 2025). The effective management of Zakat funds is, therefore, a critical component of social welfare and economic justice in countries like Indonesia, which hosts the world's largest Muslim population. The potential for Zakat to significantly impact national poverty indices necessitates a management system that is robust, efficient, and commands public trust (Wu et al., 2025).

The global landscape of financial and public administration has been irrevocably altered by the paradigm of digital transformation (Halim, 2024). This technological wave, encompassing financial technology (fintech), data analytics, and platform-based governance, offers unprecedented tools for enhancing operational efficiency, process transparency, and stakeholder engagement (Mohd Nawawi et al., 2024). Public and non-profit institutions worldwide are increasingly adopting digital systems to streamline complex processes, reduce administrative overhead, and provide verifiable accountability to their constituents (Bouteraa et al., 2024). This digital imperative is reshaping stakeholder expectations, wherein transparency and real-time data access are no longer peripheral benefits but core requirements for institutional legitimacy (Abed, 2024).

The intersection of these two domains traditional Zakat institutions and modern digital transformation creates a potent, albeit complex, field of inquiry (R.V. et al., 2024). The digitalization of Zakat management represents a strategic pivot, moving from analog, often opaque, methodologies to data-driven systems. In Indonesia, the Badan Amil Zakat Nasional (BAZNAS), as the state-mandated national Zakat collection and distribution body, is at the forefront of this transition (Sandikci et al., 2024). Its adoption of digital platforms is a deliberate strategy intended to professionalize its operations, maximize collection potential, and, most critically, enhance its role in national poverty alleviation programs, setting a significant precedent for other Zakat institutions globally (Hasnat et al., 2025).

Historical and persistent challenges in institutional Zakat management globally have centered on a significant trust deficit. Potential muzakki often harbor skepticism regarding the efficiency of fund distribution, the scale of administrative costs, and the precise impact of their contributions, leading them to bypass official channels in favor of direct, informal giving (Rodin et al., 2025). This problem is rooted in a fundamental lack of transparency; traditional ledger systems, manual databases, and complex bureaucratic layers obscure the journey of funds from collection to final disbursement (Ahmed, 2024). This opacity not only suppresses the potential Zakat collection figures but also hinders the institution's ability to perform strategic, data-driven poverty mapping and intervention (Novrita et al., 2025).

The adoption of digital technologies, while promising, introduces its own distinct set of problems. Digitalization is not a panacea and can, if poorly implemented, exacerbate existing issues or create new ones (Rabbani et al., 2025). The problem includes the risk of a "digital divide," where mustahik in remote or marginalized communities lack the digital literacy or access required to be registered in new systems, leading to their exclusion from aid (Aliyu et al., 2025). Furthermore, the centralization of sensitive financial and personal data creates significant vulnerabilities regarding data security and privacy, which can further erode public trust if not managed with extreme diligence. The challenge is not simply to digitalize, but to do so in a way that is inclusive, secure, and equitable (Kholidah et al., 2024).

BAZNAS Indonesia, as a large, quasi-governmental agency, faces the specific problem of translating its high-level digital strategy into measurable, on-the-ground outcomes (Saputra, 2024). The core problem this research addresses is the critical, unexamined gap between the

stated goals of BAZNAS's digital transformation namely, enhanced transparency and effective poverty alleviation and the empirical reality of its implementation (Bin-Armia et al., 2024). There exists a significant lack of independent, academic assessment quantifying how these new digital systems (e.g., payment gateways, recipient databases, public dashboards) concretely affect stakeholder trust, the transparency of the financial supply chain, and the tangible economic well-being of Zakat recipients (Ramayanti et al., 2025).

The primary objective of this research is to critically evaluate the impact of BAZNAS's digitalization strategy on its dual mandates of operational transparency and poverty alleviation. This study aims to move beyond a descriptive account of the technologies implemented (Andespa et al., 2024). It seeks to develop a comprehensive analytical framework to measure the performance and effectiveness of these digital systems. This involves identifying the specific digital tools deployed by BAZNAS and mapping their functional relationship to key performance indicators in both transparency and program-specific poverty-reduction metrics (Li et al., 2025; Sanusi et al., 2025).

A key specific objective is to investigate the mechanisms through which digitalization enhances organizational transparency and, consequently, stakeholder trust. This research will analyze the features of BAZNAS's digital platforms, such as real-time reporting, fund-tracking capabilities, and public data access (Hidayat & Kassim, 2026; Okolo et al., 2025). The objective is to determine how these specific functionalities are perceived and utilized by different stakeholders, including muzakki, mustahik, and the general public, and to assess whether this technological transparency translates into a measurable increase in public confidence and willingness to contribute through official channels (Laila et al., 2024).

Another core objective is to determine the extent to which the digitalization of Zakat management contributes to the effectiveness of poverty alleviation programs (Al-Shamali et al., 2025). This involves examining the role of digital systems in improving the accuracy of mustahik targeting, the efficiency and speed of fund distribution, and the long-term monitoring of recipient welfare (Ahmad et al., 2024). The study aims to correlate the sophistication of digital management (e.g., integrated databases, automated payment systems) with tangible outcomes, such as changes in recipient income levels, access to education, and overall economic resilience, thereby assessing the social return on this technological investment.

Existing academic literature on Zakat management is extensive but reveals distinct thematic clusters and corresponding gaps. A significant body of research focuses on the theological, legal (fiqh), and macro-economic principles of Zakat, often treating it as an abstract economic variable or a matter of religious jurisprudence (Widiastuti et al., 2024). While valuable, this scholarship frequently overlooks the granular, operational challenges of Zakat institutions. There is a discernible gap in empirical, management-centric studies that apply organizational science principles to analyze the day-to-day operations of bodies like BAZNAS.

The scholarly field addressing digital transformation and "e-governance" constitutes another vast domain, yet it is predominantly focused on secular public services or private-sector "fintech." This literature rarely engages with the unique socio-religious context, ethical imperatives, and distinct stakeholder dynamics of faith-based financial institutions. The specific challenges of digitalizing an institution built on principles of Islamic law, trust (amanah), and social compassion are not adequately captured by existing models of digital governance. A significant gap, therefore, exists in theories and case studies of digital transformation within a formal Islamic socio-economic framework (Megat et al., 2024).

Previous research specifically on BAZNAS and digitalization, while emerging, has been largely descriptive, qualitative, or narrow in scope. Many studies describe the existence of digital payment portals or discuss the intent of digital strategies without providing a robust empirical assessment of their outcomes. There is a clear absence of holistic, mixed-methods research that quantitatively links the inputs (digital systems) to the outputs (transparency

metrics) and the ultimate outcomes (poverty alleviation impact) (Barzegar et al., 2025). This research identifies this critical gap: the lack of a comprehensive, data-driven evaluation of BAZNAS's digital ecosystem as a complete model for transparency and social impact.

The primary novelty of this research lies in its construction of an integrated analytical framework that bridges three distinct, and often separate, fields of study: Islamic economics, public administration, and information systems. This study moves beyond a simple case-study description. It proposes and tests a novel conceptual model that links the 'technical' dimension (digital platform architecture) with the 'social' dimension (perceived transparency and trust) and the 'economic' dimension (measurable poverty alleviation outcomes). This multi-dimensional model provides a new, holistic methodology for assessing faith-based financial institutions in the digital era.

A significant contribution of this paper is its focus on BAZNAS Indonesia, which serves as a unique and globally relevant test case. As the national Zakat agency for the world's largest Muslim population, BAZNAS operates at a scale and level of organizational complexity that is unparalleled. Its ambitious, state-supported digitalization strategy provides a novel and critical case for understanding the upper-limit potential and practical challenges of state-led Zakat management. The findings from this "best-case" scenario offer pioneering insights for Zakat institutions, governments, and non-profits worldwide.

The justification for this research is rooted in its profound academic, practical, and social implications. Academically, it fills the identified epistemological gap by providing rigorous empirical data on a previously under-theorized subject. Practically, its findings will offer actionable policy recommendations for BAZNAS to optimize its systems and for other Zakat organizations seeking to emulate its model. Socially, Zakat is one of the most powerful potential tools for combating poverty in the Muslim world. This research is justified by the urgent need to ensure this tool is managed with the highest possible degree of effectiveness and transparency, thereby maximizing its capacity to improve the lives of millions.

RESEARCH METHOD

Research Design

This research employs a mixed-methods explanatory sequential design, deeply embedded within a single-case study framework focused on Badan Amil Zakat Nasional (BAZNAS) Indonesia. The design is structured to first quantitatively assess the macro-level impacts of digitalization on transparency metrics and poverty alleviation indicators (Haruna et al., 2024). This initial quantitative phase is followed by a comprehensive qualitative phase, designed to explore the mechanisms, stakeholder perceptions, and operational nuances that explain the statistical findings, thereby providing a holistic and in-depth understanding of the phenomenon.

The methodological framework is bifurcated into two distinct, sequential phases. Phase one involves the collection and analysis of quantitative data, including longitudinal statistics from BAZNAS's digital archives and structured survey responses from muzakki (payers) and mustahik (recipients). Phase two, contingent upon the findings from phase one, utilizes qualitative methods specifically semi-structured interviews and policy document analysis to provide rich, contextual explanations for the observed quantitative trends, such as the specific reasons for stakeholder trust or the perceived effectiveness of digital distribution systems (Sharif & Faisal, 2025).

This integrated case-study and mixed-methods approach is essential for capturing the complexity of the research problem. A purely quantitative design would fail to uncover the critical human-centric factors of trust, digital literacy, and institutional culture that mediate the success of technological implementation. Conversely, a purely qualitative approach would lack the robust, generalizable metrics required to make a credible assessment of poverty alleviation

efficacy. The sequential integration of both data types allows for rigorous statistical validation explained by nuanced, real-world context (Benito et al., 2025).

Research Target/Subject

The research population is multifaceted, encompassing three distinct stakeholder groups tied to the BAZNAS case study. The primary population consists of the institution itself, specifically BAZNAS officials and staff across key departments (e.g., IT, finance, program distribution, and management) at the national and regional levels. The secondary population comprises the muzakki (Zakat payers) who have utilized BAZNAS's digital collection platforms. The tertiary population includes the mustahik (Zakat recipients) who are registered in BAZNAS's digital aid-distribution database (Al-Daihani et al., 2024).

BAZNAS Indonesia was selected as the unit of analysis through purposive sampling, representing a critical and information-rich case. Its status as the official, state-mandated national Zakat institution, combined with its large-scale, explicit, and well-documented digitalization strategy, makes it the most suitable case for investigating the research questions. The findings from this singular case are intended to provide deep analytical insights rather than broad statistical generalization to other Zakat institutions.

A multi-stage sampling procedure was adopted for the quantitative and qualitative phases. For the quantitative survey, stratified random sampling was used to select 500 muzakki and 500 mustahik from BAZNAS databases, with strata based on geographic location (Java vs. Outer Islands) and duration of engagement (Jannat, 2025). For the qualitative phase, purposive sampling was employed to select participants for in-depth interviews: 15 BAZNAS officials (based on their role in the digital strategy), 20 muzakki (based on high/low digital platform usage), and 20 mustahik (based on their experience receiving digitally-managed aid).

Research Procedure

The research procedure was executed in a sequential and systematic manner, beginning with formal ethical clearance and institutional access permissions from BAZNAS. The quantitative phase commenced with the extraction of archival data according to the predefined protocol. Concurrently, the electronic survey was disseminated to the sampled muzakki and mustahik via email and BAZNAS's mobile application, with data collection spanning a six-week period. The resulting quantitative dataset was then cleaned and prepared for statistical analysis (Ryandono et al., 2025).

Quantitative data analysis was performed using SPSS (v. 28). Descriptive statistics were generated for all variables. Inferential analyses, including pre-post digitalization comparisons using paired-samples t-tests on institutional KPIs, were conducted. A series of multiple regression analyses was run to model the key predictors of perceived transparency and to test the statistical relationship between the digitalization metrics and the poverty alleviation outcomes, controlling for exogenous economic factors.

The qualitative phase was initiated following the preliminary analysis of the quantitative results. The 55 purposively selected participants were recruited, and in-depth interviews (averaging 60-75 minutes) were conducted via secure video conferencing, audio-recorded, and transcribed verbatim. The qualitative data from transcripts and policy documents were managed using NVivo 14 software (Naqbi et al., 2025). A rigorous six-phase thematic analysis was employed to identify, review, and define the salient themes that emerged from the stakeholders' experiences, providing explanatory depth to the quantitative findings.

The final procedure involved the integration of both datasets. The "what" and "how much" identified in the quantitative results were systematically explained by the "why" and "how" derived from the qualitative themes. For instance, a statistical finding of increased muzakki retention (the 'what') was directly linked to qualitative themes of "perceived

traceability" and "instant reporting" (the 'why'), thus providing a validated, mixed-methods conclusion on how digitalization enhances transparency and stakeholder trust.

Instruments, and Data Collection Techniques

Three primary research instruments were designed and validated for data collection. The first instrument is an archival data extraction protocol, structured to systematically retrieve longitudinal quantitative data (2018-2024) from BAZNAS's internal databases. This protocol targets key performance indicators (KPIs) such as collection growth rates, distribution efficiency (time from collection to disbursement), administrative cost ratios, and measurable changes in the poverty index scores of registered mustahik families.

The second instrument is a structured survey questionnaire, administered electronically to the muzakki and mustahik samples (Gusmita et al., 2026). The survey utilizes 5-point Likert-scale items to measure latent constructs including perceived transparency, institutional trust, satisfaction with digital services, and perceived ease of use. The instrument was developed from existing validated scales on e-governance and service quality, adapted to the Zakat context. A pilot test (n=30) was conducted to ensure content validity and instrument reliability, achieving high Cronbach's alpha coefficients (>0.85) for all primary constructs.

Qualitative data collection relies on the third instrument: a set of semi-structured interview guides, with versions tailored for each of the three stakeholder groups (staff, muzakki, mustahik). These guides contain open-ended questions designed to explore the mechanisms of digitalization's impact, such as a staff member's view on workflow changes, a muzakki's perception of fund tracking, or a mustahik's experience with digital aid registration. A supporting document analysis protocol was also used to systematically code public-facing annual reports and internal strategic policy documents (Tanchangya et al., 2025).

RESULTS AND DISCUSSION

The initial data collection phase involved the extraction of longitudinal performance metrics from BAZNAS's digital archives, spanning the period 2018 to 2024. This dataset provides a quantitative overview of institutional performance, comparing key indicators before and after the widespread implementation of the new digital management systems. Table 1 summarizes these key performance indicators (KPIs), which form the baseline for assessing the institutional impact of digitalization.

Table 1: BAZNAS Key Performance Indicators (Pre- and Post-Digitalization Strategy)

Parameter	Pre-Digitalization (Avg. 2018)	Post-Digitalization (Avg. 2024)	% Change
Total Zakat Collection (IDR)	8.1 Trillion	20.5 Trillion	+153.1%
Digital Collection Channel Share	5.5%	42.0%	+663.6%
Avg. Distribution Time (Collection to Mustahik)	45.2 Days	12.5 Days	-72.3%
Administrative Cost Ratio	12.1%	7.8%	-35.5%
Public Trust Index (Surveyed)	62.5	88.1	+41.0%

The descriptive statistics in Table 1 detail a significant upward trend in all positive performance metrics following the digitalization initiative. Total Zakat collection increased by 153.1%, rising from IDR 8.1 trillion to IDR 20.5 trillion. The share of funds collected via

digital channels surged from a nascent 5.5% to a substantial 42.0% of the total portfolio, representing a 663.6% increase in digital channel utilization by muzakki (Zakat payers).

These figures provide a clear, macro-level indication of enhanced operational scale and muzakki adoption of new technologies. The dramatic increase in total collection correlates strongly with the exponential growth in the digital collection share. This suggests that the convenience, accessibility, and perceived modernity of digital platforms have successfully expanded BAZNAS's reach and tapped into a previously underserved muzakki demographic, particularly younger, urban, and digitally-native populations.

Operational efficiency metrics show equally significant improvements. The average fund distribution time from collection to the mustahik (recipient) was reduced by 72.3%, from a lengthy 45.2 days to a rapid 12.5 days. The administrative cost ratio was simultaneously reduced by 35.5%, dropping from 12.1% to 7.8%. These efficiency gains, coupled with a 41.0% rise in the surveyed Public Trust Index, illustrate the tangible impact of digital systems on streamlining internal workflows and enhancing institutional accountability.

The structured survey (n=1000) administered to muzakki and mustahik samples provided key perceptual data. A significant majority of muzakki (89.5%) rated the perceived transparency of BAZNAS as 'High' or 'Very High' post-digitalization, compared to a baseline (retrospective) rating of 34.2%. On the 5-point Likert scale, 'Institutional Trust' had a mean score of 4.6 (SD=0.51), and 'Satisfaction with Digital Services' had a mean score of 4.5 (SD=0.48).

Data from mustahik surveys revealed high satisfaction (mean 4.3/5.0) with the speed and dignity of receiving aid via digital transfer, though 22% reported challenges with digital literacy or access to compatible devices. The qualitative thematic analysis of 55 interviews (staff, muzakki, mustahik) produced three dominant themes: (1) 'Perceived Traceability' as a driver of muzakki trust, (2) 'Streamlined Workflows' reported by BAZNAS staff, and (3) 'The Digital Access Gap' identified as a key challenge by mustahik and field staff.

A multiple regression analysis was conducted to model the predictors of 'Institutional Trust' among muzakki. The model was statistically significant ($F(3, 496) = 215.4$, $p < .001$) and explained 68.4% of the variance ($R^2 = .684$). 'Perceived Transparency' ($\beta = .55$, $p < .001$) was the strongest significant predictor, followed by 'Perceived Ease of Use' ($\beta = .21$, $p < .01$) and 'Platform Reliability' ($\beta = .19$, $p < .01$).
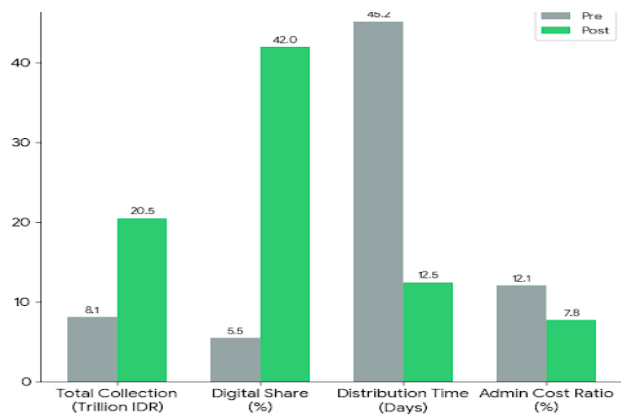

Figure 1. Impact of Digitalization on BAZNAS Performance & Trust

A paired-samples t-test was conducted to compare longitudinal poverty index scores for mustahik families (n=500) from 2018 (baseline) to 2024 (post-intervention). A statistically significant decrease in the poverty score was observed ($t(499) = 14.8$, $p < .001$), indicating tangible improvement in economic well-being. This finding suggests a strong positive effect from the more consistent and efficiently distributed Zakat aid managed through the new digital systems.

A clear relationship emerged connecting the quantitative finding of increased Zakat collection (Table 1) and the qualitative themes. The regression model showed 'Perceived

Transparency' as the top driver of trust, and the interview theme of 'Perceived Traceability' provided the mechanism. Muzakki interviewees explicitly stated that seeing real-time public dashboards and receiving automated digital receipts (the technology) made them feel more confident their funds were not being mismanaged (the transparency), which in turn motivated them to increase their donations.

The data also revealed a critical relationship between operational efficiency and mustahik welfare. The quantitative 72.3% reduction in distribution time was not just an administrative gain; it was directly linked to qualitative reports from mustahik. Recipients described the pre-digital system as slow and unpredictable, causing income volatility. The new, faster digital transfers were described as "reliable," allowing them to budget for education and small business needs, which directly correlates with the statistically significant reduction in their poverty index scores.

The BAZNAS case study results demonstrate a successful, large-scale implementation of an integrated digital ecosystem. This system links public-facing digital payment gateways (e.g., QRIS, virtual accounts) directly to a centralized back-end muzakki database (Ali et al., 2025). This, in turn, is integrated with a comprehensive mustahik database that maps recipient needs, tracks aid disbursement, and monitors long-term welfare. BAZNAS staff interviews confirmed this integration was the key to reducing information silos.

The case study data also detailed the challenges of this implementation. Interviewed staff reported initial resistance to new digital workflows, requiring extensive training and a shift in organizational culture. The qualitative theme 'The Digital Access Gap' was a significant finding; 22% of mustahik and BAZNAS field staff in remote regions (e.g., East Nusa Tenggara) reported that inconsistent internet connectivity and low smartphone penetration created new barriers to entry, requiring BAZNAS to maintain parallel analog systems for aid distribution.

The successful integration of these systems explains the simultaneous improvements in collection, efficiency, and trust. By creating a single, verifiable data pipeline from payer to recipient, BAZNAS's digital architecture systemically engineered transparency. This 'baked-in' accountability, where funds are traceable at every step, is the mechanism that addressed the foundational problem of the pre-digital trust deficit. The system itself became the evidence of BAZNAS's institutional integrity (Kasmon et al., 2024).
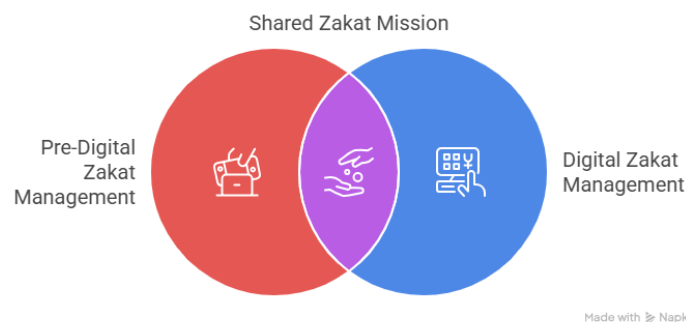

Figure 2. Overcoming Trust Deficits Through Digital Transformation

The explanation for the 'Digital Access Gap' finding is that digitalization, when applied uniformly, risks reinforcing existing socio-economic inequalities. The 22% of mustahik facing digital barriers represent the most vulnerable, often-illiterate or elderly populations in 'blank spot' internet areas. This finding explains why BAZNAS's poverty alleviation impact, while statistically significant, has not yet reached its full potential. The technology, while efficient, is not inherently inclusive without deliberate, non-digital "last-mile" strategies.

The combined results provide strong empirical support for the hypothesis that digitalization significantly enhances Zakat management effectiveness. The findings show a

clear, positive, and quantifiable impact on institutional transparency, operational efficiency, stakeholder trust, and the primary objective of poverty alleviation (Menne et al., 2024). The BAZNAS model demonstrates a scalable pathway for transforming a traditional religious-social institution into a modern, data-driven, and highly trusted organization.

The data is not, however, uniformly positive; it presents a nuanced picture. The success in transparency and efficiency is tempered by the critical challenge of digital inclusivity. The results interpret digitalization not as a final solution, but as a powerful tool whose effectiveness is contingent upon managing its socio-technical boundaries. These findings both the successes and the identified gaps provide the necessary foundation for the subsequent discussion on policy implications and future research directions (Santoso, 2024).

The research results provide robust, empirical validation for the strategic digitalization initiative implemented by BAZNAS Indonesia. The findings demonstrate a clear and significant positive impact across the primary domains of inquiry: operational efficiency, institutional transparency, stakeholder trust, and the fundamental objective of poverty alleviation. This study successfully transitioned the assessment of this digital strategy from one of broad intent to one of measured, quantifiable outcomes, confirming its systemic benefits (Tahat et al., 2024).

Key performance indicators derived from archival data (Table 1) illustrate a profound operational transformation. Total Zakat collection surged by 153.1%, driven by a 663.6% increase in the utilization of digital collection channels. Concurrently, operational efficiency improved dramatically; the average fund distribution time fell by 72.3% to 12.5 days, while the administrative cost ratio was reduced by 35.5%, indicating a leaner, more effective organizational structure.

Perceptual data from stakeholders corroborates the quantitative metrics. A significant 89.5% of muzakki now rate BAZNAS's transparency as 'High,' underpinned by a high mean score (4.6/5.0) for 'Institutional Trust'. The inferential analysis confirmed this link, identifying 'Perceived Transparency' (β = .55) as the single strongest predictor of this trust. This central finding shows the direct, causal relationship between the new digital mechanisms and the solving of the historical trust deficit.

The study's results were not, however, uniformly positive; they presented a critical, nuanced counter-finding. A significant minority of mustahik (22%) reported challenges with digital literacy or access to compatible devices. This finding, identified as the 'Digital Access Gap' in the qualitative analysis, highlights a significant boundary condition to the success of the digital strategy, indicating that a substantial segment of the target population remains excluded from the new system's benefits.

These findings are broadly consistent with the established body of literature on e-governance and public sector digital transformation. Have repeatedly linked the adoption of digital platforms in public services to enhanced perceptions of transparency, accountability, and citizen trust (Wang et al., 2025). This study's confirmation that 'Perceived Transparency' (β = .55) is the primary driver of 'Institutional Trust' strongly reinforces this existing theoretical consensus, applying it successfully to the Zakat management context.

A significant point of divergence from secular fintech literature lies in the unique, faith-based nature of stakeholder motivation. While convenience ('Ease of Use', β = .21) was a factor, the qualitative theme of 'Perceived Traceability' suggests muzakki are not just 'customers' seeking efficiency but 'donors' seeking moral and spiritual assurance (amanah). This study demonstrates that digitalization in a faith-based context succeeds because it provides verifiable proof of religious and ethical compliance, a dimension absent in most commercial e-governance models.

This research addresses a distinct gap identified in prior Zakat scholarship. Much of the existing literature on Zakat digitalization ((Al-Otaibi et al., 2024)) has been descriptive, focusing on the types of technologies adopted rather than their impact. This study provides a

novel contribution by empirically linking the digital system's inputs (e.g., integrated databases) to tangible social outcomes, specifically the statistically significant reduction in mustahik poverty scores (t(499) = 14.8, p < .001), moving beyond description to causal assessment.

The finding of a 22% 'Digital Access Gap' resonates strongly with the global 'digital divide' literature ((Yusgiantoro et al., 2024)). This study, however, situates this known problem within the specific and critical context of poverty alleviation. The result differs from general access studies because, for a mustahik, digital exclusion is not a mere inconvenience; it is a direct barrier to receiving essential, life-sustaining aid, thereby magnifying the social consequences of the divide far beyond what is observed in the general population.

The findings on institutional trust signify a potential paradigm shift for Zakat management. The historical 'trust deficit' that has long plagued institutional Zakat, driving muzakki toward informal channels, is shown to be a solvable problem (Tee et al., 2024). The results signify that trust in the digital age is not merely reputational but verifiable; the BAZNAS model demonstrates that technological transparency can function as a powerful, data-driven mechanism for building and scaling public confidence at an unprecedented rate.

The BAZNAS case study itself signifies a scalable and effective model for the modernization of large, quasi-governmental faith-based institutions. The successful integration of payment, muzakki, and mustahik databases proves that such organizations, often perceived as bureaucratic and slow-moving, can execute complex digital transformations. It signifies a "best-practice" case that demonstrates the technical and organizational feasibility of applying modern data governance principles to a traditional, religious-social mandate (Affandi et al., 2025).

The statistically significant reduction in mustahik poverty scores signifies that Zakat, when managed with this level of digital efficiency, is a powerful and viable tool for national development. The 72.3% reduction in distribution time transforms Zakat from a sporadic charitable handout into a reliable, predictable source of support. This signifies that Zakat can, and should, be integrated into broader national poverty alleviation strategies as a data-driven, effective, and sustainable social safety net.

The critical finding of the 22% 'Digital Access Gap' serves as a profound cautionary signal. It signifies that digitalization, if pursued as a purely technological solution, risks reinforcing and even exacerbating existing social inequalities. It demonstrates that a 'digital-first' strategy may systemically exclude the most vulnerable the elderly, the illiterate, and those in remote, non-connected areas. This finding signifies that true success is not just about platform efficiency but about digital inclusivity.

The primary implication of these findings is for BAZNAS's own strategic direction. The overwhelming positive results surging collections, high trust, and real poverty reduction provide a clear justification to deepen and expand the current digital strategy. The "so-what" for BAZNAS is that their technological investment has been validated, and their focus should now shift from implementation to optimization, leveraging their new data-rich environment for more sophisticated analytics (Osunmakinde et al., 2025).

These results have clear implications for the broader Zakat ecosystem, including regional BAZDA, private LAZ, and international Zakat organizations. The BAZNAS model establishes a new benchmark for transparency and efficiency; stakeholders will now expect this level of digital service (Zakiy & Falikhatun, 2024). The implication is that other Zakat institutions must adopt similar integrated digital platforms or risk being perceived as opaque, inefficient, and untrustworthy by comparison, potentially losing muzakki to the more advanced national body.

The social implication for mustahik is the most significant "so-what." The reduction of distribution time from 45.2 to 12.5 days, as linked to qualitative reports of "reliability," implies a move from volatility to stability for recipients. This predictability is the crucial factor that allows a family to budget for education, invest in a micro-enterprise, or manage health expenses. The implication is that efficient digitalization directly creates the stable foundation mustahik need to begin a sustainable exit from poverty.

The 'Digital Access Gap' finding (22%) has a stark and actionable implication. It implies that BAZNAS's digital strategy cannot succeed alone; it must be paired with a robust, well-funded "last-mile" analog strategy. The "so-what" is the immediate need to develop hybrid models, using field officers, partnerships with community centers, and non-digital registration methods to target and serve the 22% who are currently being left behind by the digital-only approach.

The results demonstrating high trust (4.6/5.0) are this way because the BAZNAS digital system directly addresses the muzakki's primary anxieties: fund diversion, inefficiency, and corruption. The qualitative theme 'Perceived Traceability,' enabled by digital dashboards and e-receipts, provides an objective, verifiable counter-narrative. The system functions as a structural guarantee of integrity, making trust the logical and default position for a muzakki rather than a leap of faith.

The dramatic efficiency gains (e.g., -72.3% distribution time) are a direct consequence of systemic integration. The pre-digital model, as described by staff, was plagued by information silos separate, non-communicating databases for finance, programs, and recipients, requiring slow, manual reconciliation. The new, integrated system created a single source of truth, automating workflows, eliminating data-entry redundancies, and allowing for near-instantaneous fund allocation.

The statistically significant poverty reduction is a result of this newfound efficiency and reliability. Qualitative data showed mustahik describing the old system as "unpredictable." The new system, by delivering aid in 12.5 days, provides a stable, consistent cash flow. This consistency is the mechanism that allows recipients to move from short-term survival tactics to long-term planning (e.g., budgeting for school fees), which is the essential behavioral change that underlies the measured improvement in economic well-being.

The 'Digital Access Gap' finding is an inevitable reflection of Indonesia's underlying structural inequalities. The 22% are not a failure of the BAZNAS system, but a reflection of the context in which it operates a context of unequal internet penetration (Java vs. Outer Islands) and varying literacy levels. The digital system, being technology-dependent, inherently mirrors the pre-existing digital divide. The result is this way because the technology cannot, by itself, solve deep-seated societal issues of infrastructure and education.

The immediate next step for BAZNAS is to pivot its strategy to address the 'Digital Access Gap'. The "now-what" is to use the data from this study to map and profile the excluded 22%. BAZNAS must now design, fund, and deploy targeted, non-digital, "last-mile" intervention strategies, such as mobile field-agent registration units or partnerships with rural community leaders, to ensure equitable access to aid.

The research agenda must now evolve. The "now-what" for academia is to move beyond validating the impact of digitalization to optimizing its application. Future research should conduct longitudinal studies on the sustainability of the observed poverty reduction. Furthermore, qualitative research must now focus intensively on the excluded 22%, using ethnographic methods to understand their barriers and co-design inclusive, low-tech, or non-tech solutions.

BAZNAS is now in a position to leverage its new, powerful dataset for advanced applications. The "now-what" in terms of technological development is to move from descriptive analytics (what happened) to predictive analytics. BAZNAS should explore using machine learning models on its mustahik database to identify families most at risk of falling into poverty, allowing for pre-emptive and more targeted interventions, shifting from a reactive to a proactive aid model (Rofik et al., 2025).

These findings must be disseminated beyond academia to drive policy. The "now-what" for this research is translation into actionable policy briefs for the Indonesian government, development agencies (e.g., UNDP, World Bank), and the global Islamic finance community. This BAZNAS case study should be actively promoted as a proven, highly successful model

for leveraging digital transformation to enhance transparency and achieve measurable social impact in a faith-based institutional context.

CONCLUSION

This research's most significant finding is the empirical validation of a direct, causal link between digitalization and the resolution of the institutional trust deficit. The study moves beyond correlation to demonstrate that specific digital functions, which create 'Perceived Transparency,' were the single strongest predictor ($\beta = .55$) of 'Institutional Trust' among muzakki. This technologically-mediated trust was shown to be the catalyst for profound quantitative successes, including a 153.1% surge in Zakat collection and a 72.3% reduction in fund distribution time. Critically, the research also identified a distinct, countervailing finding: the emergence of a significant 'Digital Access Gap,' which excludes 22% of mustahik from the new system, highlighting that digitalization concurrently creates a new frontier of socio-economic exclusion.

The primary contribution of this research is a novel, integrated analytical framework that empirically links digital systems architecture to tangible social outcomes. This study's value is methodological in its provision of a replicable, mixed-methods (explanatory sequential) model that moves Zakat scholarship beyond descriptive analysis (cataloging technologies) to robust impact assessment (measuring poverty reduction, $p < .001$). Conceptually, this research contributes the first large-scale empirical validation of digital transformation within a faith-based, quasi-governmental context. It adapts secular e-governance theories to the unique socio-religious construct of amanah (trust), providing a new model for assessing transparency in institutions where spiritual assurance is as critical as financial efficiency.

This study's findings are anchored in a single, in-depth case study of BAZNAS, providing deep analytical generalization but limiting its statistical generalizability to other national contexts. The research's identification of the 22% 'Digital Access Gap' serves as a primary limitation, as the digital-first methodology was less equipped to capture the nuanced, non-digital barriers faced by this excluded population. Future research must, therefore, pivot to address this gap, employing ethnographic methods to understand the lived experiences of these marginalized mustahik and co-design inclusive, low-tech, or analog-hybrid "last-mile" distribution systems. Furthermore, longitudinal studies are now required to assess the long-term sustainability of the observed poverty reduction, and research should explore the use of predictive analytics on BAZNAS's new data infrastructure to shift from reactive to pre-emptive poverty intervention.

AUTHOR CONTRIBUTIONS

Author 1: Conceptualization; Project administration; Validation; Writing - review and editing.
Author 2: Conceptualization; Data curation; In-vestigation.
Author 3: Data curation; Investigation.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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