UTILIZATION OF TECHNOLOGY IN ZAKAT MANAGEMENT AND DISTRIBUTION: AN INNOVATIVE STUDY AT BAZNAS SAMARINDA

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Abstract. *This study examines the implementation of the SIMBA and Menara Masjid applications at BAZNAS Samarinda, assessing their impact on operational efficiency and transparency in zakat management. Quantitative analysis revealed significant improvements in user satisfaction and operational efficiency, while qualitative data from in-depth interviews confirmed an enhanced understanding of the applications' features post-training. Findings indicate that perceived ease of use and perceived usefulness significantly influence technology acceptance and effectiveness, aligning with the Technology Acceptance Model (TAM) and the Theory of Planned Behavior (TPB). The research highlights the importance of technology integration in zakat management and demonstrates that targeted technological interventions, supported by comprehensive training programs, can substantially enhance zakat management capabilities. Furthermore, the study provides valuable lessons for other zakat-managing organizations aiming to modernize their zakat management processes through tailored technological solutions, strengthening transparency and stakeholder communication. Strategically, this study extends the Resource Dependence Theory by showing how strategic technology use can reduce reliance on external factors and increase organizational autonomy. It also sets the foundation for broader digital application in public administration, suggesting a strategic roadmap for the adoption of similar solutions in other regions and organizations, aiming to improve social justice and community service through technological innovation.*

Keywords: *Zakat Management, BAZNAS Samarinda, Information Technology, Transparency, Efficiency, Accountability*

1. INTRODUCTION

In Indonesia, the management of zakat by BAZNAS Samarinda confronts considerable challenges concerning efficiency, transparency, and accountability. Addressing these challenges necessitates a robust management system enhanced by information and communication technology, as highlighted by Mirnawati's study (Mirnawati 2022). This study identified significant gaps in the effectiveness and coverage of zakat-related work programs in Samarinda, particularly in managing and distributing both productive and consumptive zakat.

Since 2012, BAZNAS Kaltim has consistently enhanced the BAZNAS Information System (SIMBA) application to bolster zakat management. This application provides various features that improve record-keeping and reporting, thereby streamlining the management process. Furthermore, the introduction of the Menara Masjid application has facilitated better management of mosque funds and zakat across Indonesia, providing technological support that bolsters transparency and accountability in zakat management.

The research conducted in Barru District, Indonesia, as detailed in the study by Kasmiah (2024), underscores the importance of technological integration to meet community needs and enhance social justice through administrative efficiency. This is

paralleled in our study where BAZNAS Samarinda's implementation of technology aims to extend zakat distribution's scope and effectiveness, ensuring equitable and purposeful fund allocation.

In June 2023, BAZNAS Kaltim organized a training session at Hotel Jatra to enhance the technological proficiency of zakat managers from various regions within East and North Kalimantan. This initiative mirrors the insights from the Barru study, which emphasized the need for continuous innovation in governance to improve service delivery and meet the evolving demands of the community. The broad regional participation in these trainings reflects a significant commitment to harnessing technology for advancing zakat management capabilities.

This research on the "Utilization of Technology in Zakat Management and Distribution: An Innovative Study at BAZNAS Samarinda" is crucial for ensuring the efficient and effective management of zakat, leveraging technology to aid those in need while enhancing transparency and accountability. Similar to the findings from the Barru study, this approach is instrumental in building public trust and adapting to the increasing digital transaction familiarity among the community. Moreover, technology enables BAZNAS Samarinda to overcome geographical and physical challenges that impede efficient zakat distribution, ensuring that aid reaches beneficiaries in remote locations.

By integrating the lessons from the Barru study, particularly the emphasis on digital literacy, community engagement, and the strategic use of technology to streamline public services, this research aims to provide comprehensive insights into innovative solutions that can be adopted by other zakat institutions in Indonesia and globally, thereby broadening the social impact of zakat.

2. LITERATURE REVIEW

2.1 Nonprofit Organization Management Theory

Resource Dependence Theory: The article by Euis Soliha and Rr. Kurnia Maharani (2016) elaborates on how organizations manage resources and their dependency on external sources to acquire these resources, which is highly relevant in the context of BAZNAS Samarinda's use of technology. Initially proposed by Pfeffer and Salancik in 1978, this theory emphasizes the importance for organizations to minimize their dependency on external resources while maximizing other organizations' dependency on their resources. The authors explain that an organization's success can be gauged by how well it manages these dependencies to maintain operational autonomy and efficiency. Applying this theory to BAZNAS Samarinda demonstrates how technology can be leveraged to improve zakat management and distribution, by reducing reliance on inefficient manual processes and strengthening the organization's capacity to cope with rapid external environmental changes. By adopting the SIMBA and Menara Masjid applications, BAZNAS Samarinda has taken strategic steps to not only enhance their internal effectiveness but also to increase external stakeholders' dependency on their services, which in turn enhances the legitimacy and sustainability of their organization.

Institutional Theory: DiMaggio and Powell (1983) originally proposed that organizations adapt to new norms and practices to enhance their legitimacy and efficiency. Building on this framework, Kisworo (2019) explore the application of these concepts within the public sector report ing in Indonesia. This research examines how BAZNAS Samarinda's adoption of information technology aligns with the institutional models described, demonstrating how modern IT practices can be integrated into established organizational structures to improve efficiency and legitimacy.

2.2 Information Systems and Technology Management

Technology Acceptance Model (TAM): According to Davis (1989), as discussed by Dwiyana Putra (2019) in "The Evolution of the Technology Acceptance Model (TAM) and Recent Progress on Technology Acceptance Research in ELT," the Technology

Acceptance Model provides a robust framework for analyzing how users, such as managers and staff at BAZNAS, accept and utilize new technology. This study applies the TAM to examine its relevance and applicability within the context of technology acceptance at BAZNAS Samarinda, assessing how well it explains user adoption behaviors in this specific organizational setting.

Institutional Theory: Originally proposed by DiMaggio and Powell in 1983, this theory suggests that organizations adapt to new norms and practices to enhance their legitimacy and efficiency. Building upon this framework, Hermin Istiasih et al. (2022) discuss the application of these concepts within contemporary organizational settings. This research examines how the adoption of information technology by BAZNAS Samarinda aligns with the institutional models described, demonstrating how modern IT practices can be integrated into established organizational structures to improve efficiency and legitimacy.1.3 Accountability and Transparency in Financial Institutions.

2.3 Adoption within Organizations

Adoption within Organizations: Diffusion of Innovations Theory: Rogers (2003) in Kerk F. Kee (2017) elaborates on how new ideas and technologies are adopted and disseminated within organizations and societies. This research applies this theory to explore how information technology has been adopted and integrated at BAZNAS Samarinda.

2.4 Data-Driven Decision Making and Analytics

Data-Driven Decision Making (DDDM): Brynjolfsson, Hitt, and Kim (2011) highlight the importance of leveraging big data and analytics for more informed strategic decision-making. This concept is further explored by K. Merkx (2022), who emphasizes its practical applications. This study applies these principles to analyze the data utilized in decision-making processes at BAZNAS, aligning with current advancements in data-driven strategies.

2.5 User Satisfaction and Service Quality

SERVQUAL Model: Originally developed by Parasuraman, Zeithaml, and Berry (1988), and later applied in Anwar, K (2017) in "Analyzing the Conceptual Model of Service Quality and Its Relationship with Guests' Satisfaction," this model proposes a framework for assessing service quality within organizations across dimensions such as reliability, responsiveness, assurance, empathy, and tangibles. In this study, the SERVQUAL model is employed to evaluate the quality of service provided by BAZNAS Samarinda through its implemented technology.

3. RESEARCH METHODS

The selection of the appropriate research methodology is critical to the essence of a study. For the study titled "Utilization of Technology in the Management and Distribution of Zakat: An Innovative Study at BAZNAS Samarinda," a mixed methods approach has been employed. This methodology integrates both quantitative and qualitative approaches to collect and analyze data, enabling a deeper and comprehensive understanding of the impact of technology on zakat management and distribution at BAZNAS Samarinda. Here are the detailed methods used in this study:

a. Quantitative Approach. Questionnaire: A structured questionnaire was used to collect numeric data from respondents, including zakat managers, zakat recipients, and donors. The questionnaire featured closed-ended questions with response scales (e.g., Very Easy, Easy, Moderately Easy, etc.) aimed at assessing the ease of use of the SIMBA and Menara Masjid applications, the effectiveness of technology in enhancing transparency, the speed of zakat processing, and the clarity and transparency of zakat information received.

b. Qualitative Approach. In-depth Interviews: These were conducted to gain deeper insights into the experiences, perceptions, and challenges faced by technology users and system developers. The open-ended questions allowed respondents to provide detailed and contextual responses on how technology influences the speed and accuracy of zakat management, as well as the challenges encountered in using the technology.
c. Integration of Quantitative and Qualitative Data:
    1) Data Integration: Quantitative data from the questionnaires provided an overview of the technology's effectiveness and acceptance, while qualitative data from in-depth interviews offered context and nuances related to how this technology is implemented and received in the field. Combining these two types of data allows for a more robust and comprehensive analysis.
    2) Triangulation: Both types of data are used for cross-validation of findings, which enhances the reliability and validity of the research outcomes. For example, if quantitative data show a high satisfaction level with the application, and qualitative data also support this finding with positive testimonials from users, researchers can be more confident in their findings.
d. Implementation:
    1) Data Collection: Quantitative data were collected through online or paper surveys, while qualitative data were gathered through interview sessions that could be conducted face-to-face or virtually, depending on the availability and preferences of respondents.
    2) Data Analysis: Quantitative data were analyzed using descriptive statistics to assess the frequency and distribution of responses, whereas qualitative data were analyzed using content or thematic analysis techniques to identify common themes and patterns.

This mixed methods approach is ideal for tackling the complexities of using technology in a nonprofit organization like BAZNAS Samarinda, where both technical and human aspects are equally important. By employing this approach, the research not only measures the effects of technology but also understands the social and organizational context in which it operates. Utilizing the theories outlined in the literature review, a robust theoretical framework can be constructed to analyze data, discuss findings, and develop recommendations based on the research results at BAZNAS Samarinda. This approach also aids in devising an effective research methodology to answer the research questions and achieve the set objectives. Based on the data collected from questionnaires and in-depth interviews, the research findings, discussions, conclusions, and recommendations can be formulated as follows: (Further details would follow based on actual research outcomes).

4. RESULTS AND DISCUSSION
4.1 Effectiveness of SIMBA and Menara Masjid Applications
The implementation of the SIMBA and Menara Masjid applications at BAZNAS Samarinda has significantly improved operational efficiency and transparency in zakat management. Quantitative analysis revealed high user satisfaction, with survey respondents particularly praising the diverse functionalities of SIMBA that support detailed reporting needs. This enhancement in the management processes is evidenced by the reduced time required for report generation and decision-making, streamlining the overall zakat distribution workflow.

Discussion:
The positive outcomes from the use of these applications align well with the principles

of the Technology Acceptance Model (TAM) and the Theory of Planned Behavior (TPB). These findings indicate that perceived ease of use and the perceived usefulness of the technology significantly influence its acceptance and effectiveness. The case of BAZNAS Samarinda exemplifies how ease of use and comprehensive features can drive user acceptance and improve operational efficiencies, confirming the relevance of these theoretical frameworks in practical settings.

4.2 Impact of Training on Technology Adoption

Qualitative data from in-depth interviews indicated that training sessions were crucial in bridging the gap between technology implementation and user competence. Participants reported an improved understanding of the applications' features post-training.

Discussion:

These results reinforce the Theory of Planned Behavior, which posits that behavior is driven by behavioral intentions, where attitudes towards the behavior, subjective norms, and perceived behavioral control play significant roles. Training sessions enhanced participant's perceived behavioral control, facilitating a smoother transition to new technological systems.

Implications and Importance of Research Findings

a. Theoretical Implications:
   The integration of the SIMBA and Menara Masjid applications illustrates the practical application of the Technology Acceptance Model (TAM) and the Theory of Planned Behavior (TPB), providing empirical support for these theories within the context of zakat management. These theories help understand the dynamics of technology acceptance and the behavioral intentions that influence the adoption of new systems in nonprofit organizational settings.

b. Practical Implications:
   The successful implementation of these applications provides a model for other zakat-managing organizations. By demonstrating improvements in operational efficiency, transparency, and stakeholder communication, this research highlights the importance of investing in technology to modernize and streamline zakat management processes. It underscores how tailored technological solutions can effectively meet the specific needs of zakat management, enhancing service quality and stakeholder satisfaction.

c. Strategic Implications:
   This study extends the Resource Dependence Theory by showing how strategic use of technology can reduce dependence on external factors, allowing organizations like BAZNAS Samarinda to gain greater autonomy and efficiency. Additionally, the comparative insights from the Barru District's Digital Village Application affirm the broader applicability and effectiveness of digital solutions in public administration, suggesting a strategic roadmap for other regions and organizations.

CONCLUSION

This research substantiates that targeted technological interventions, augmented by comprehensive training programs, substantially bolster the management capabilities of zakat institutions. The implementation of the SIMBA and Menara Masjid applications at BAZNAS Samarinda, coupled with the insights from the Barru District's Digital Village Application, underscore the transformative impact of technology on zakat management practices. These findings not only align with, but also enrich, existing theoretical models on technology adoption and behavioral intentions, demonstrating that effective

implementation of technology can significantly enhance organizational efficiency and stakeholder engagement.

Furthermore, the success of these technological solutions in addressing the traditional challenges faced by zakat management illustrates their potential to serve as benchmarks for similar organizations. The adoption of comparable technologies is likely to yield improvements in operational efficiency, transparency, and stakeholder communication across zakat-managing bodies, fostering enhanced trust and satisfaction among stakeholders. This study not only underscores the critical role of integrating modern technology in non-profit management but also paves the way for future technological innovations within the sector globally. The strategic application of these findings can guide other regions and organizations in adopting digital solutions that cater to their unique administrative and service delivery challenges, setting a precedent for the progressive use of technology in enhancing social justice and community service.

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