

A Triple Helix Approach to Prioritizing Key Problems in Zakat Performance: An Analytic Network Process Study from South Sulawesi

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Abstract: Zakat holds substantial potential as an Islamic social finance instrument for poverty alleviation and inclusive economic development; however, its performance in many regions remains constrained not only by governance inefficiencies but also by limitations in how zakat management problems are identified and analyzed. Existing studies often rely on partial, single-actor, or linear approaches that fail to capture the complex interdependencies among stakeholders, resulting in less accurate prioritization of key issues. This limitation necessitates a more integrative and multi-actor analytical framework. Grounded in the Triple Helix framework, this study conceptualizes zakat governance as an interactive system involving experts (academia), regulators (government), and practitioners (zakat institutions). The study aims to identify and prioritize key problems affecting zakat performance in South Sulawesi by integrating these multi-actor perspectives within a structured decision-making model. This study employs the Analytic Network Process (ANP) to capture the interdependencies among problem clusters across institutional, community, and government dimensions. The results indicate that institutional problems constitute the most critical constraint to zakat performance, followed by government and community problems. Key institutional bottlenecks include weak governance, inadequate service quality, and low transparency and accountability. At the community level, low public zakat literacy emerges as the dominant barrier, while the absence of integrated data systems and weak local government support represent major governmental constraints. The findings imply that improving zakat performance requires coordinated and sequenced reforms encompassing regulatory coherence, institutional governance strengthening, and community engagement.

Keywords: zakat performance; triple helix, ANP

Introduction

Zakat plays a strategic role in promoting socio-economic justice, poverty alleviation, and inclusive development within Muslim societies worldwide¹. As a compulsory instrument of Islamic social finance, zakat serves not only as a spiritual obligation but also as a formal mechanism for wealth redistribution and social protection across various countries². In many Muslim-majority and minority contexts, zakat institutions have been integrated into national development agendas to address structural poverty, reduce inequality, and enhance economic resilience. However, despite its recognized importance and substantial potential, the performance of zakat management at the global level remains suboptimal. A persistent challenge across different countries is the significant gap between zakat potential and its actual collection and distribution, reflecting institutional inefficiencies, governance constraints, and behavioral factors among stakeholders.

In Indonesia, which has the largest Muslim population in the world, zakat holds immense potential to contribute to national development goals, particularly in reducing poverty, supporting vulnerable communities, and enhancing economic resilience³. However, despite its substantial potential, the realization and performance of zakat management remain far below expectations⁴. One of the most persistent challenges in zakat governance is the substantial gap between zakat potential and its actual realization. Pusat Kajian Strategis – Badan Amil Zakat Nasional (Puskas BAZNAS) estimated that the national zakat potential reached approximately IDR 327 trillion in 2023, equivalent to nearly 75% of the government's social protection budget⁵. Even when limited to formal employment sectors such as civil servants, state-owned

¹ E R Kismawadi, "Islamic Fintech: Navigating the Regulatory Framework and Promoting Financial Inclusion in Gulf Cooperation Council (GCC) Countries," *Journal of Islamic Marketing*, 2024, <https://doi.org/10.1108/JIMA-02-2023-0061>.

² Sri Herlina, Dana Syahputra Barus, and Muhammad Syahbudi, "The Triple Helix Model of Islamic Social Financial Institutions Achieves SDGs 2030 Finance in North Sumatra," *Electronic Journal of Education Social Economics and Technology* 6, no. 2 (2025): 1228, <https://doi.org/10.33122/ejeset.v6i2.1228>.

³ Imsar Imsar, Febriandi Akbar Sitompul, and Juliana Nasution, "Pengaruh Dana Zakat, Pembiayaan Syariah, Anggaran Penerimaan Dan Belanja Negara (APBN) Terhadap Tingkat Kemiskinan Dengan Indeks Pembangunan Manusia Sebagai Variabel Intervening," *Oikonomika Jurnal Kajian Ekonomi Dan Keuangan Syariah* 4, no. 1 (2023): 1–13, <https://doi.org/10.53491/oikonomika.v4i1.557>.

⁴ Bismi Khalidin et al., "Islamic Economics Towards the Sustainability of Economic Development," *International Journal of Social Science Humanity & Management Research* 03, no. 11 (2024), <https://doi.org/10.58806/ijsshmr.2024.v3i11n16>.

⁵ Pusat Kajian Strategis – Badan Amil Zakat Nasional (Puskas BAZNAS), "Potensi Zakat BAZNAS RI," 2022, <https://www.puskasbaznas.com/publications/published/officialnews/1703-potensi-zakat-baznas-ri>.

enterprise employees, military and police personnel, and national private-sector employees, the estimated zakat potential amounted to approximately IDR 5.8 trillion. These findings confirm that zakat possesses substantial fiscal and redistributive potential capable of strengthening national social welfare systems. However, despite this enormous potential, the actual realization remains significantly below expectations. In 2023, the total collection of zakat, infaq, sadaqah, and other religious social funds (ZIS-DSKL) amounted to only IDR 32.321 trillion—less than 10% of the estimated national potential—highlighting a persistent inefficiency in zakat mobilization and institutional performance.

This gap between potential and realization is particularly evident in South Sulawesi, a province with considerable economic resources and strong Islamic socio-cultural foundations. An official release by BAZNAS of South Sulawesi⁶ reports that, based on provincial and district/city-level mapping, the total zakat potential in South Sulawesi reaches approximately IDR 7.8 trillion. Meanwhile, a study by Muhammad Hasbi Zaenal et al.⁷ and a report from Puskas BAZNAS⁸, which estimated provincial zakat potential derived from income zakat of civil servants (ASN and non-ASN), zakat from provincially owned enterprises (BUMD), and retail zakat, identified a potential of IDR 217.6 billion—making South Sulawesi the highest in Eastern Indonesia and ranked fifth nationally. However, data from BAZNAS of South Sulawesi indicate that the realization of ZIS collection as of December 2024 reached only approximately IDR 6.59 billion, equivalent to merely 0.08% of its mapped potential⁹.

This substantial gap is consistent with the National Zakat Index (Indeks Zakat Nasional, IZN) report published by Puskas BAZNAS¹⁰, which shows that South Sulawesi recorded an overall zakat performance score of 0.48, categorized as “Fairly Good,” but with significant disparities across dimensions. Notably, the micro dimension—which reflects institutional performance and zakat impact—scored only 0.35 (“Poor”), indicating weaknesses in institutional effectiveness and operational outcomes. Within this dimension, the institutional indicator scored 0.42, suggesting moderate capacity but critical operational deficiencies. Most concerning, the zakat collection variable scored an extremely low 0.13

⁶ BAZNAS Provinsi Sulawesi Selatan, “BAZNAS RI Dukung BAZNAS Se-Provinsi Sulsel Wujudkan Standar Tata Kelola Dana ZIS DSKL,” 2024, <https://sulsel.baznas.go.id/news-show/Transparansi/12176?back=https://sulsel.baznas.go.id/news-all>.

⁷ Muhammad Hasbi Zaenal et al., “Mapping Zakat Potential at the City Level in Indonesia and Strategies for Optimizing Zakat Collection,” *Economica: Jurnal Ekonomi Islam* 13, no. 1 (2022): 25–48.

⁸ Pusat Kajian Strategis – Badan Amil Zakat Nasional (Puskas BAZNAS), “Potensi Zakat BAZNAS RI.”

⁹ Sulsel.Baznas.Go.Id, “Penghimpunan Zakat, Infak, Dan Sedekah Januari-Desember 2024,” 2024, <https://sulsel.baznas.go.id/>.

¹⁰ Pusat Kajian Strategis – Badan Amil Zakat Nasional, “Indeks Zakat Nasional 2020 Sulawesi Utara, Sulawesi Tengah, Sulawesi Selatan, Sulawesi Tenggara, Gorontalo, Sulawesi Barat Maluku, Maluku Utara” (Jakarta, 2020).

(“Poor”), driven by a 17% decline in collection growth and relatively low absolute collection levels. Similarly, the zakat distribution variable scored 0.44, reflecting suboptimal fund disbursement effectiveness, limited coverage, and incomplete realization of zakat’s socio-economic impact.

Previous studies on zakat governance have highlighted that challenges in regions such as South Sulawesi are not merely technical but structural and systemic in nature.¹¹ The relatively low collection performance has been associated with limited effectiveness in mobilizing zakat from eligible contributors, often linked to weak institutional outreach, limited public trust, insufficient zakat literacy, and inadequate service innovation¹². On the distribution side, suboptimal performance has been attributed to inefficiencies in beneficiary targeting, data integration, and program implementation, which constrain the socio-economic impact of zakat funds¹³. Furthermore, although the macro dimension of zakat governance—such as regulatory support, government involvement, and data availability—has been assessed as relatively strong in several studies, these structural advantages have not consistently translated into improved institutional performance or optimal zakat outcomes¹⁴.

From a theoretical perspective, these structural challenges can be understood through the lens of the Triple Helix model, which emphasizes the dynamic interaction among institutional actors, government authorities, and societal stakeholders as key drivers of governance effectiveness and innovation¹⁵.

¹¹ Dita Herdian, “The Role of Islamic Philanthropy in Poverty Alleviation: A Systematic Literature Review of Concepts, Mechanism, and Practical Challenges,” *Shacral Shari Ah Economics Review Journal* 2, no. 1 (2025): 262–81, <https://doi.org/10.62952/shacral.v2i1.66>; Abdullah Haidar and Siti A Satifa, “Review of COVID-19 Impact and Islamic Social Finance,” *Jeksyah (Islamic Economics Journal)* 3, no. 02 (2023): 88–101, <https://doi.org/10.54045/jeksyah.v3i02.999>.

¹² Amran Tabarik and Chairil Alfarezel, “Evaluation Study of Islamic Microfinance Program Based on Islamic Social Funds (Zakat, Waqf, and Sadaqah),” *SeEk* 2, no. 1 (2025): 1–8, <https://doi.org/10.35335/8eqn3v81>; Ridwanto, Mukhtar Lutfi, and Abdul W Haddade, “Strategi Sosialisasi Model Crowdfunding Sebagai Alternatif Penghimpunan Dana Zakat Infak Sedekah Pada Dompot Dhuafa Sulawesi Selatan,” *Al-Kharaj Jurnal Ekonomi Keuangan & Bisnis Syariah* 6, no. 7 (2024), <https://doi.org/10.47467/alkharaj.v6i7.4085>.

¹³ Sri Fadilah et al., “Performance Measurement of Zakat Utilization: The Effectiveness of Zakat Distribution,” *Kne Social Sciences*, 2023, <https://doi.org/10.18502/kss.v8i18.14344>; M Jaenudin and Ali Hamdan, “Penilaian Dampak Zakat, Infak, Sedekah Terhadap Kemiskinan Spiritual Dan Material Penerima Manfaat Laznas LMI: Pendekatan CIBEST,” *Jurnal Ekonomi Syariah Teori Dan Terapan* 9, no. 3 (2022): 362–78, <https://doi.org/10.20473/vol9iss20223pp362-378>; Wiwik Supianingsih and Falikhatun Falikhatun, “Evaluation of Zakat Management in Zakat Amil Agency for the Regency of Trenggalek East Java,” *International Journal of Economics Business and Management Research* 06, no. 09 (2022): 221–35, <https://doi.org/10.51505/ijebmr.2022.6916>.

¹⁴ Nopi Hernawati, Mey Maemunah, and Ririn S Kuntorini, “Effectiveness Zakat Operational Risk Management on the Pandemic Era of Covid 19,” 2022, <https://doi.org/10.2991/assehr.k.220407.037>.

¹⁵ A Hidayatullah and A Priantina, “Toward Zakat Management Integration in Indonesia: Problems and Solution,” *Ahkam: Jurnal Ilmu Syariah* 18, no. 2 (2018): 321–46,

Within the zakat ecosystem, zakat institutions represent the organizational pillar responsible for operational management and service delivery, government authorities serve as the regulatory and enabling pillar providing legal frameworks and institutional support, while society functions as both the contributor and beneficiary pillar shaping participation, trust, and compliance¹⁶. The effectiveness of zakat governance is therefore highly dependent on the strength, alignment, and synergy among these three interconnected pillars.

The persistence of these challenges raises serious concerns regarding the effectiveness of zakat governance in realizing its full socio-economic potential¹⁷. The declining collection growth and suboptimal distribution performance suggest the existence of multidimensional constraints involving institutional capacity, public participation, and regulatory effectiveness. From the Triple Helix perspective, these weaknesses reflect not only internal institutional inefficiencies but also insufficient coordination and synergy between zakat institutions, government regulators, and societal actors¹⁸. Weak institutional capacity limits service effectiveness and innovation, inadequate regulatory integration constrains policy implementation and system interoperability, and low societal engagement reduces zakat participation and compliance¹⁹. These conditions highlight the urgent need for systematic institutional strengthening, improved governance transparency, enhanced digital infrastructure, and stronger coordination among zakat institutions, government authorities, and societal stakeholders²⁰. Without an integrated and synergistic governance framework, the substantial zakat potential in South Sulawesi will remain underutilized, limiting its contribution to poverty alleviation, social equity, and sustainable socio-economic development²¹.

<https://doi.org/10.15408/ajis.v18i2.6319>; Yuzhuo Cai and Annina Lattu, "Triple Helix or Quadruple Helix: Which Model of Innovation to Choose for Empirical Studies?," *Minerva* 60, no. 2 (2022): 257–80; Herlina, Barus, and Syahbudi, "The Triple Helix Model of Islamic Social Financial Institutions Achieves SDGs 2030 Finance in North Sumatra."

¹⁶ T Widiastuti et al., "Optimizing Zakat Governance in East Java Using Analytical Network Process (ANP): The Role of Zakat Technology (ZakaTech)," *Journal of Islamic Accounting and Business Research* 12, no. 3 (2021): 301–19, <https://doi.org/10.1108/JIABR-09-2020-0307>.

¹⁷ Shamsher Mohamad and Zulkarnain Muhamad Sori, "Governance Issues in Managing Zakat Funds," *I-Iecons E-Proceedings*, 2023, 960–65, <https://doi.org/10.33102/ieecons.v10i1.116>.

¹⁸ Hidayatullah and Priantina, "Toward Zakat Management Integration in Indonesia: Problems and Solution"; Herlina, Barus, and Syahbudi, "The Triple Helix Model of Islamic Social Financial Institutions Achieves SDGs 2030 Finance in North Sumatra."

¹⁹ Irmawati Wahyuningsi, Lince Bulutoding, and Suhartono Suhartono, "Pengelolaan Zakat Produktif Berbasis PSAK 109 Dalam Mewujudkan Good Zakat Governance," *Isafir Islamic Accounting and Finance Review* 2, no. 1 (2021): 54–63, <https://doi.org/10.24252/isafir.v2i1.19468>.

²⁰ S Herianingrum et al., "Zakat as an Instrument of Poverty Reduction in Indonesia," *Journal of Islamic Accounting and Business Research* 15, no. 4 (2024): 643–60, <https://doi.org/10.1108/JIABR-11-2021-0307>.

²¹ Mohamad and Sori, "Governance Issues in Managing Zakat Funds."

Previous studies have examined various aspects of zakat performance and governance. Research has highlighted the importance of institutional capacity, governance quality, transparency, and accountability in improving zakat management effectiveness²². Other studies have emphasized the role of socio-cultural factors, including zakat literacy, donor trust, and religious awareness, in influencing zakat compliance and participation²³. Regulatory frameworks, technological innovation, and data integration have also been identified as key factors shaping zakat performance²⁴. From the Triple Helix perspective, these studies implicitly reflect the roles of institutional, societal, and governmental actors, although they often examine these dimensions separately²⁵. Methodologically, several studies have employed decision-support tools such as the Analytic Hierarchy Process (AHP), Analytic Network Process (ANP), and multi-criteria decision-making models to prioritize zakat development priorities and identify key performance determinants²⁶. These studies provide valuable insights into the structural and institutional factors influencing zakat governance²⁷.

²² Harmon Amir Nasution et al., "Sejarah Kebijakan Fiskal Dalam Islam," *Al-Ma'lumat: Jurnal Ilmu-Ilmu Kelslaman* 1, no. 2 (2023): 72–80; Faizatul Ansoriyah et al., "Identifying Public Value of Zakat Management Organizations: A Review of Muzakki's Perception," *Dinika Academic Journal of Islamic Studies* 8, no. 1 (2023): 1–21, <https://doi.org/10.22515/dinika.v8i1.6664>.

²³ Mohammad Qutaiba, Mohd Owais, and Abdus S Muharam, "The Current Issue of Reporting Zakat in Indonesia: A Critical Analysis," *Journal of Islamic Economic and Business Research* 4, no. 1 (2024): 1–23, <https://doi.org/10.18196/jiebr.v4i1.227>; Mega A Mulindra, Ira Novianty, and Iwan Setiawan, "Muzakki's Perception Regarding Implementation Good Corporate Governance (GCG) Against Muzakki's Trust in OPZ," *Indonesian Journal of Economics and Management* 3, no. 3 (2023): 582–91, <https://doi.org/10.35313/ijem.v3i3.4876>.

²⁴ Noraini Shamsuddin and Nor S Bakar, "Influence of the Internal Audit Function Towards Zakat Performance," *International Journal of Islamic Economics and Finance Research* 4, no. 1 July (2021): 77–93, <https://doi.org/10.53840/ijiefer50>; Teh S Tajuddin, "Trust in Zakat Authorities and Zakat Compliance: A Conceptual Analysis," *Almimbar*, 2023, 115–28, <https://doi.org/10.53840/almimbar.v3i2.82>.

²⁵ Herianingrum et al., "Zakat as an Instrument of Poverty Reduction in Indonesia"; Ika S Wahyuni-TD, Hasnah Haron, and Yudi Fernando, "The Effects of Good Governance and Fraud Prevention on Performance of the Zakat Institutions in Indonesia: A Shari'ah Forensic Accounting Perspective," *International Journal of Islamic and Middle Eastern Finance and Management* 14, no. 4 (2021): 692–712, <https://doi.org/10.1108/imefm-03-2019-0089>.

²⁶ Mulindra, Novianty, and Setiawan, "Muzakki's Perception Regarding Implementation Good Corporate Governance (GCG) Against Muzakki's Trust in OPZ"; Jejen Hendar, Neni Ruhaeni, and Asep H Zakiran, "The Concept of Safe Zakat Management According to the Provisions of the Prevailing Laws and Regulations in Indonesia," *Kne Social Sciences*, 2023, <https://doi.org/10.18502/kss.v8i18.14266>.

²⁷ Nur A Bakri et al., "Financial Report of Zakat Institutions: Guidelines and Accounting Standard," *International Journal of Academic Research in Business and Social Sciences* 12, no. 1 (2022), <https://doi.org/10.6007/ijarbss/v12-i1/11468>.

However, despite these contributions, several important research gaps remain. First, most prior studies focus on either institutional, societal, or regulatory factors in isolation, without adopting an integrated Triple Helix-based framework that simultaneously examines institutional, societal, and governmental dimensions as an interconnected governance system. Second, limited research has explicitly prioritized both problems and solutions within a unified analytical model, particularly using network-based approaches that capture interdependencies among determinants across Triple Helix actors. Third, empirical evidence at the regional level, especially in South Sulawesi, remains limited, despite the province's strategic importance and documented performance challenges. Fourth, existing studies often emphasize solution development without first systematically diagnosing and prioritizing the underlying structural problems that constrain zakat performance within the broader governance ecosystem.

Addressing these gaps requires a comprehensive analytical framework that integrates multi-stakeholder perspectives and captures the complex interrelationships among zakat performance determinants within the Triple Helix system. The Analytic Network Process (ANP) provides a suitable methodological approach, as it allows for the analysis of interdependent relationships among institutional, societal, and governmental factors. By incorporating expert judgments from academics, regulators, and practitioners—representing key actors within the Triple Helix framework—ANP enables a systematic prioritization of both problems and solutions, providing evidence-based insights for policy formulation, institutional strengthening, and governance reform. Therefore, the primary objective of this study is to identify and prioritize the key problems affecting zakat performance in South Sulawesi from institutional, societal, and governmental perspectives within a Triple Helix governance framework using a multi-stakeholder Analytic Network Process approach. Specifically, this study aims to diagnose the most critical institutional, societal, and governmental problems constraining zakat performance.

This study contributes to the literature on zakat governance and Islamic social finance by proposing a comprehensive and integrative analytical framework that captures the complexity of zakat performance challenges. Unlike previous studies that tend to examine zakat issues in isolated dimensions, this research integrates institutional, societal, and governmental factors within a unified multi-level model, enabling a more holistic understanding of the underlying problems and potential reform pathways. Methodologically, the study advances prior approaches by applying the Analytic Network Process (ANP), which allows for the identification of interdependencies among determinants, moving beyond conventional hierarchical analyses. Empirically, this study provides evidence from South Sulawesi, offering region-specific insights that enrich the broader discourse on zakat governance. The significance

of this study lies in its ability to generate actionable priorities for stakeholders, supporting the development of more effective, integrated, and sustainable zakat management systems to enhance their socio-economic impact.

Methods

Design and Approach

This study employed a mixed qualitative–quantitative research design using a field-based multi-stakeholder approach to identify and prioritize key problems affecting zakat performance in South Sulawesi, Indonesia ²⁸. The qualitative component was used to identify, structure, and validate problem and solution determinants across institutional, societal, and governmental dimensions, while the quantitative component utilized the ANP to determine their relative priorities and interdependencies based on expert judgments ²⁹. This integrative design is particularly suitable for analyzing zakat governance, which involves complex interactions among zakat institutions, government regulators, and society, consistent with the Triple Helix governance framework ³⁰. The ANP approach enables the modeling of interdependent relationships among determinants and produces a structured prioritization framework for evidence-based policy formulation.

The empirical setting of this research was South Sulawesi, Indonesia, a province with significant zakat potential but relatively low realization and performance levels, particularly in terms of collection and distribution effectiveness. Data were collected from formal zakat management organizations, including the National Amil Zakat Agency (BAZNAS) and authorized Amil Zakat Institutions (LAZ), as well as relevant stakeholders involved in zakat governance.

Procedure and Framework

This study was conducted through four sequential stages, as presented in Table 1.

²⁸ John W Creswell and J David Creswell, *Research Design Qualitative, Quantitative, and Mixed Methods Approaches*, 5th ed. (New York, NY: SAGE Publications, Inc, 2017), <http://www.ceil-conicet.gov.ar/wp-content/uploads/2015/10/Creswell-Cap-10.pdf>.

²⁹ Thomas L Saaty and Luis G Vargas, *The Analytic Network Process* (Springer, 2013); Thomas L Saaty, "Decision Making with the Analytic Hierarchy Process," *International Journal of Services Sciences* 1, no. 1 (2008): 83–98, <https://doi.org/https://doi.org/10.1504/IJSSCI.2008.017590>.

³⁰ Cai and Lattu, "Triple Helix or Quadruple Helix: Which Model of Innovation to Choose for Empirical Studies?"

Table 1
Research Procedural Steps

Research Stage	Main Phase	Activity Description
Stage 1	Goal Formulation	Define research objectives focusing on identifying and prioritizing institutional, societal, and governmental problems affecting zakat performance. Establish analytical scope and determine the suitability of a network-based decision model.
Stage 2	Qualitative Structuring Phase	Conduct literature review on zakat governance, Islamic social finance, and regulatory systems. Form expert panel consisting of academics, regulators, and zakat practitioners. Identify, validate, and refine problem determinants. Classify determinants into institutional, societal, and governmental clusters. Establish interdependencies among determinants and construct ANP network structure.
Stage 3	Quantitative ANP Analysis	Develop ANP-based pairwise comparison questionnaire using Saaty's 1–9 scale. Conduct structured expert interviews. Construct pairwise comparison matrices. Calculate eigenvector priority weights. Evaluate consistency ratio ($CR < 0.10$). Aggregate stakeholder judgments using geometric mean. Construct unweighted, weighted, and limit supermatrices.
Stage 4	Priority Synthesis and Interpretation	Generate global priority ranking of problems. Interpret interdependencies among determinants. Develop policy and governance implications for zakat performance improvement in South Sulawesi.

This study adopts a structured analytical framework designed to systematically identify and prioritize both the key problems influencing zakat performance. The analytical objective is structured into three interrelated clusters based on the Triple Helix governance perspective, which emphasizes the complementary roles of zakat institutions, society, and government in shaping zakat performance. The institutional aspect focuses on internal organizational capacity, including amil competence, service quality, governance effectiveness, transparency, and performance evaluation systems. The community aspect

reflects societal participation through determinants such as public zakat literacy, donor preferences, and the role of religious and public figures in influencing zakat compliance and institutional trust. The government aspect captures the regulatory and structural environment, including government support, regulatory consistency, data integration, and digital infrastructure supporting zakat governance.

Table 2
 Cluster and Sub- Cluster

Cluster	Sub-Cluster	Element (Node)	Operational Definition
Problems	Institutional Aspect	Limited amil competence	Insufficient technical, managerial, and sharia competencies of zakat personnel affecting institutional performance.
		Inadequate service quality	Poor service accessibility, responsiveness, and relationship management reducing donor trust.
		Weak organizational governance	Ineffective internal governance structures and decision-making processes.
		Low transparency and accountability	Lack of clear and accessible financial and performance reporting systems.
	Community Aspect	Weak institutional performance evaluation	Absence of standardized performance indicators and monitoring systems.
		Low public zakat literacy	Limited public awareness and understanding of zakat obligations and institutional roles.
		Preference for alternative donation channels	Donor tendency to distribute funds outside formal zakat institutions.
		Limited role of religious leaders and public figures	Weak advocacy and social influence supporting zakat participation.

Government Aspect	Weak local government support	Limited policy backing and facilitation from government authorities.
	Regulatory inconsistencies	Misalignment and overlap between national and regional zakat regulations.
	Absence of integrated zakat data systems	Lack of unified and coordinated databases supporting zakat management.
	Underdeveloped digital infrastructure	Weak technological platforms supporting zakat services and coordination.
	Addressing alternative donation preferences	Strengthening institutional attractiveness and donor trust.
Optimizing leadership and public figure involvement	Increasing advocacy roles of ulama and influential public figures.	

In total, the framework includes 12 problem determinants across the three sub-clusters. The institutional aspect consists of five determinants, the community aspect includes three determinants, and the government aspect contains four determinants. These determinants were identified through a literature review and validated by expert panel consultations, ensuring that the framework accurately reflects the institutional, societal, and governmental realities of zakat governance and provides a structured basis for ANP analysis.

The analytical framework was operationalized using the ANP, which enables the modeling of complex interdependencies among determinants. Unlike linear decision models, ANP recognizes that zakat performance is shaped by reciprocal relationships among institutional capacity, societal participation, and regulatory effectiveness. This network-based approach allows for the identification of both direct and indirect influences among determinants, providing a more realistic and comprehensive representation of zakat governance dynamics ³¹.

³¹ Thomas L Saaty, *Theory and Applications of the Analytic Network Process: Decision Making with Benefits, Opportunities, Costs, and Risks* (RWS publications, 2005); Saaty and Vargas, *The Analytic Network Process*.

Expert Panel and Data Collection

To ensure the validity and reliability of the analytical framework and prioritization process, an expert panel consisting of 15 participants was established. The panel was composed of representatives from three key stakeholder groups reflecting the Triple Helix governance structure. The first group included academics specializing in Islamic economics, zakat, and Islamic social finance, who contributed theoretical insights and analytical perspectives. The second group consisted of regulators involved in zakat governance and policy oversight, providing institutional and regulatory perspectives. The third group included practitioners from zakat management organizations, particularly from Badan Amil Zakat Nasional (BAZNAS) and authorized Amil Zakat Institutions (LAZ) operating in South Sulawesi, who contributed practical and operational insights based on field experience.

The selection of expert participants followed purposive sampling criteria to ensure expertise relevance and decision quality. Specifically, experts were required to have a minimum of two years of professional experience in zakat management, Islamic social finance, academic research, or regulatory oversight. In addition, participants were selected based on their demonstrated involvement in zakat-related activities, institutional leadership roles, or academic contributions to zakat research and governance.

Data collection was conducted through structured individual interviews using ANP-based pairwise comparison questionnaires. Each expert was asked to evaluate the relative importance of determinants through systematic pairwise comparisons using a standardized judgment scale. The use of individual interviews ensured that each expert's judgment was expressed independently, thereby minimizing the risk of group conformity bias and preserving the integrity of individual expertise. This approach also enabled deeper clarification of expert reasoning, enhancing the validity and reliability of the prioritization results. Through this rigorous multi-stakeholder data collection process, the study ensured that the resulting analytical framework and prioritization outcomes accurately reflect the institutional realities, societal dynamics, and regulatory environment shaping zakat performance.

The ANP questionnaire was then designed using Saaty's nine-point fundamental scale (1–9), where 1 indicates equal importance and 9 indicates extreme importance. Experts conducted pairwise comparisons among clusters, among determinants within clusters, and across interrelated determinants to capture feedback relationships. Structured individual interviews were conducted to ensure independent judgments and minimize bias.

Table 3
Pairwise Comparison Scale

Definition of importance	Explanation	Intensity
Extreme importance	An activity is overwhelmingly favored over another	9
Very, very strong		8
Very strong	An activity is favored very strongly over another	7
Strong plus		6
Strong importance	Experience and judgement strongly favor one activity	5
Moderate plus		4
Moderate importance	Experience and judgement slightly favor one activity	3
Weak or slight		2
Equal importance	Two activities contribute equally to the objective	1

Model Construction and Mathematical Analysis

The ANP model consists of clusters and nodes (specific determinants) interconnected through influence relationships. For each pairwise comparison matrix $A=[a_{ij}]$, where a_{ij} represents the relative importance of element i over element j , the reciprocal property applies $a_{ij}=1/a_{ji}$.

$$A\omega = \lambda_{max}\omega$$

where λ_{max} is the maximum eigenvalue of matrix A . In practical computation, the eigenvector was approximated through normalization, where each matrix element was divided by the column sum and then averaged across rows:

$$\omega_i = \frac{1}{n} \sum_{j=1}^n \frac{a_{ij}}{\sum_{i=1}^n a_{ij}}$$

Consistency of judgments was evaluated to ensure logical coherence. The Consistency Index (CI) was calculated as:

$$CI = \frac{\lambda_{max} - n}{n - 1}$$

and the Consistency Ratio (CR) was obtained by comparing CI with the Random Index (RI):

$$CR = \frac{CI}{RI}$$

A matrix was considered consistent if $CR < 0.10$. The results indicate that all matrices across stakeholder groups met the acceptable consistency threshold, confirming the reliability of expert judgments.

Local priority vectors were assembled into a supermatrix:

$$W = \begin{bmatrix} W_{11} & W_{12} & \dots \\ W_{21} & W_{22} & \dots \\ \dots & \dots & \dots \end{bmatrix}$$

The weighted supermatrix was then raised to limiting powers:

$$\lim_{k \rightarrow \infty} W^k = W^\infty$$

The resulting limit supermatrix provides the final global priority weights representing the long-term stable influence of each determinant within the network.

Given the involvement of multiple stakeholder groups, aggregation of judgments was conducted using the geometric mean method, which preserves the reciprocal properties of pairwise comparisons. For each criterion, aggregated weights were calculated as:

$$\omega_i^{GM} = \left(\prod_{k=1}^m \omega_{ik} \right)^{\frac{1}{m}}$$

where ω_{ik} represents the priority weight assigned by stakeholder group k , and m denotes the number of stakeholder groups.

All preliminary calculations—normalization, eigenvalue approximation, CI, CR, and geometric mean aggregation—were performed using Microsoft Excel to ensure transparency and replicability. The complete ANP model was subsequently reconstructed and validated using *Super Decisions* software, enabling network modeling, supermatrix generation (unweighted, weighted, and limit), and final priority synthesis.

The final output of the ANP analysis produced a comprehensive ranking of institutional, societal, and governmental determinants influencing zakat

performance. By integrating qualitative structuring, mathematical rigor, multi-stakeholder aggregation, and software-assisted network analysis, this methodology provides a robust analytical foundation for prioritizing complex governance reforms in Islamic social finance systems.

Results and Discussion

Rater Agreement and Judgment Consistency Analysis

To ensure the methodological rigor of the ANP model, this study conducted two complementary validation tests: (1) **Kendall's Coefficient of Concordance (W)** to assess inter-rater agreement, and (2) the **inconsistency ratio** to evaluate the internal logical coherence of pairwise comparisons within each stakeholder group. The results of both tests are presented in the following tables and subsequently interpreted in an integrated manner.

Table 4
Kendall's Coefficient of Concordance (W)

Cluster/Sub-Cluster	Kendall's W
Problem (Overall)	0.25
Institutional Problem	0.14
Community Problem	0.86
Government Problem	0.32

Source: Processed Data (2026)

As shown in Table 4, the overall agreement among experts, regulators, and practitioners in the **Problem cluster** is relatively low to moderate ($W = 0.25$), indicating partial convergence in diagnosing zakat governance constraints. At the sub-cluster level, the **Community Problem** dimension demonstrates a very high level of agreement ($W = 0.86$), reflecting strong consensus that societal factors—such as zakat literacy and public engagement—constitute central challenges. In contrast, the **Institutional Problem** sub-cluster records low agreement ($W = 0.14$), indicating differing perspectives regarding internal governance weaknesses. The **Government Problem** dimension shows moderate agreement ($W = 0.32$), implying partial convergence on regulatory and structural issues.

Table 5
Inconsistency Ratio Results (ANP)

Cluster/Sub-Cluster	Expert	Regulator	Practitioner
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Problem (Overall)	0.00000	0.00000	0.00000
Institutional Problem	0.05476	0.00000	0.00812
Community Problem	0.00885	0.00000	0.01759
Government Problem	0.00388	0.00000	0.00000

Source: Processed Data (2026)

Table 5 demonstrates that all inconsistency values fall well below the commonly accepted threshold of 0.10, confirming a high degree of internal logical coherence in the pairwise comparisons. At the aggregate level, inconsistency values are either zero or near zero for both problem and solution clusters. The highest value (0.05476) appears in the **Institutional Problem** sub-cluster for the expert group; however, it remains within acceptable limits, indicating reliable judgment structure. Most other values are extremely small or exactly zero, particularly in the government-related and solution sub-clusters, demonstrating highly stable evaluation patterns.

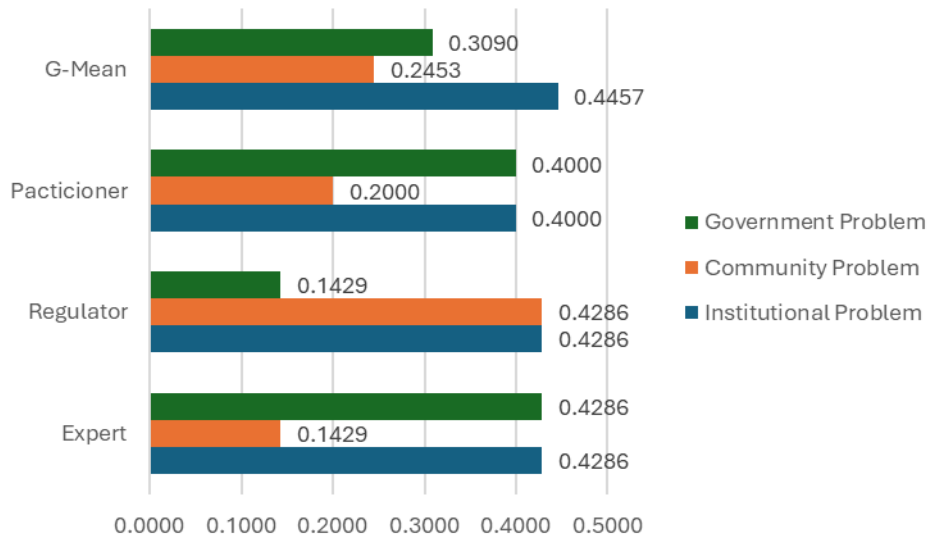
The combined analysis of Kendall’s W and inconsistency ratios provides two complementary insights. First, the very low inconsistency values confirm that each stakeholder group made logically coherent and methodologically sound judgments. The ANP weighting results are therefore internally reliable. Second, the variability observed in Kendall’s W indicates that differences across stakeholders arise not from random or inconsistent reasoning, but from systematically distinct institutional perspectives. Strong consensus is evident in identifying community-related problems, while weaker agreement characterizes institutional and solution dimensions. Thus, the findings suggest that zakat governance challenges are widely recognized at the societal level, but institutional reform pathways remain subject to debate among experts, regulators, and practitioners. The integration of agreement and consistency tests therefore strengthens the robustness of the study, demonstrating that the ANP results are both statistically reliable and substantively reflective of multi-actor governance dynamics.

Problem Priority

The results of the ANP in Figure 1 reveal differentiated yet structurally coherent perceptions among the three stakeholder groups—experts, regulators, and practitioners—regarding the principal constraints affecting zakat performance in South Sulawesi. When aggregated using the geometric mean, the priorities exhibit a clear hierarchical ordering of problem clusters. At the aggregate level, institutional problems emerge as the most critical constraint (G-Mean = 0.4457), followed by government problems (G-Mean = 0.3090) and community problems (G-Mean = 0.2453). This hierarchy indicates that systemic weaknesses within

zakat institutions constitute the primary bottleneck in optimizing overall performance.

Figure 1
ANP Results on Problem Priority



Institutional problems receive consistently high weights from experts (0.4286) and practitioners (0.4000), while regulators also assign a substantial weight (0.4286), reflecting a notable degree of convergence across stakeholder groups. Such alignment suggests a shared recognition that internal governance challenges—ranging from managerial capacity and organizational professionalism to data integration, transparency, accountability, and operational efficiency—are central determinants of zakat underperformance. Within a Triple Helix governance framework, institutional fragility generates systemic spillover effects that extend beyond the organizational sphere. Weak institutional credibility may erode public trust and participation, while limited managerial capacity can constrain the effective implementation of regulatory frameworks and public policy directives. Consequently, institutional reform represents a strategic entry point for systemic improvement in zakat governance. Strengthening institutional architecture is not merely an internal administrative concern but a structural prerequisite for enhancing cross-sectoral coordination, policy coherence, and sustainable performance outcomes.

Government-related issues rank second in the aggregated results, with a geometric mean of 0.3090. However, the distribution of weights reveals perceptual asymmetry among stakeholders. Experts (0.4286) and practitioners (0.4000) perceive governmental constraints as relatively significant, whereas

regulators assign a markedly lower weight (0.1429). This divergence suggests that actors operating within the governmental apparatus may regard existing regulatory frameworks and policy instruments as adequate, while external stakeholders identify persistent deficiencies in regulatory harmonization, fiscal incentives, supervisory mechanisms, and inter-agency coordination. Such perceptual gaps underscore a critical governance challenge: misalignment in problem recognition across Triple Helix actors can impede the formulation of coherent and mutually reinforcing interventions. Without shared diagnostic clarity, reform initiatives risk fragmentation and diminished effectiveness.

Community-related problems occupy the third position in the aggregated ranking (G-Mean = 0.2453), yet here again perceptual differences are evident. Regulators assign a relatively high weight to this cluster (0.4286), whereas experts (0.1429) and practitioners (0.2000) evaluate it as comparatively less critical. This divergence indicates that regulators tend to emphasize issues such as low zakat literacy, limited compliance among muzaki, and insufficient public trust as primary constraints. In contrast, experts and practitioners appear to interpret these societal challenges as downstream consequences of institutional and regulatory weaknesses. Conceptually, this suggests that community-level constraints may be endogenous to institutional performance. Public participation and trust are often shaped by perceptions of organizational credibility, governance quality, and policy coherence. Therefore, efforts to enhance societal engagement may require upstream structural reforms rather than isolated behavioral or awareness-based interventions.

Taken together, the ANP-based prioritization reinforces a systemic interpretation of zakat governance in which performance challenges cannot be adequately explained through single-actor analysis. Instead, they reflect interdependent dynamics among institutional, governmental, and societal actors within the Triple Helix configuration³². The findings imply that reform strategies should follow a sequenced and structurally informed approach, beginning with institutional strengthening—particularly governance reform, professionalization, and digital integration—followed by regulatory alignment and enhanced governmental support, and subsequently reinforced by community engagement and literacy enhancement initiatives³³. By establishing a clear hierarchy of

³² Nur R Sari and Namla E Syariati, "Zizwaf Digitalization: The Empowerment of People Economic's Strategy Amidst Covid-19," *International Journal of Advanced Engineering Research and Science* 9, no. 8 (2022): 394–404, <https://doi.org/10.22161/ijaers.98.45>; Eva Y Chaerani and Amrie Firmansyah, "Regional Revenues, Audit Opinions, Local Government Financial Performance: The Moderating Role of Capital Expenditure," *Riset* 6, no. 1 (2024): 90–103, <https://doi.org/10.37641/riset.v6i1.2064>.

³³ Rusdin Nawu, "Managerial Performance-Based Education and Training in South Sulawesi," *Khazanah Sosial* 4, no. 3 (2022): 434–46, <https://doi.org/10.15575/ks.v4i3.19012>.

constraints, this study contributes to the development of an integrated prioritization framework that supports evidence-based decision-making in zakat governance³⁴. Ultimately, improving zakat performance in South Sulawesi requires structural recalibration across interconnected governance layers, with institutional reform serving as the catalytic driver of systemic transformation³⁵.

Institutional Problem Priority

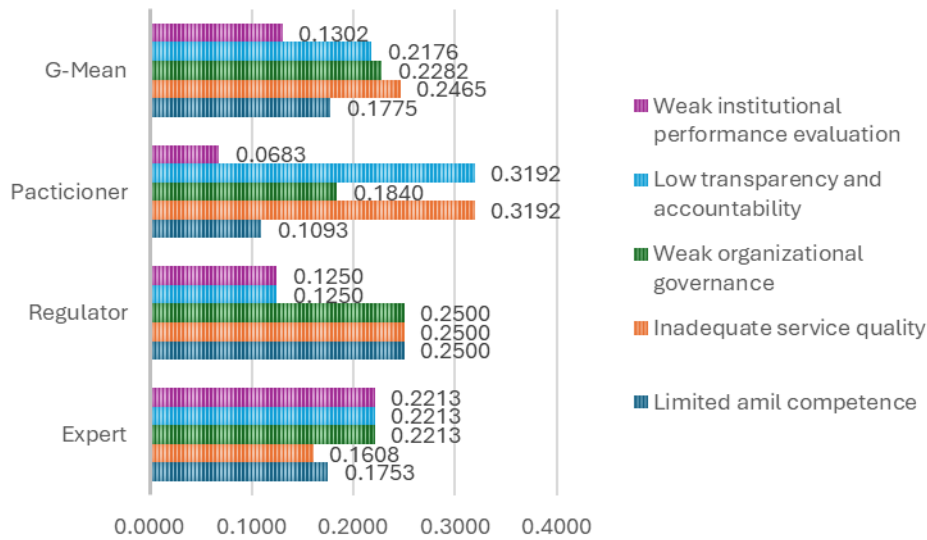
The ANP results for the sub-cluster of Institutional Problems in Figure 2 provide a more granular understanding of the internal constraints affecting zakat performance in South Sulawesi. By disaggregating the institutional dimension into five specific issues, the analysis reveals differentiated priorities across experts, regulators, and practitioners, while the geometric mean (G-Mean) offers an aggregated hierarchy of institutional constraints.

At the aggregate level, inadequate service quality emerges as the most critical institutional problem (G-Mean = 0.2465), followed by weak organizational governance (G-Mean = 0.2282), low transparency and accountability (G-Mean = 0.2176), limited amil competence (G-Mean = 0.1775), and finally weak institutional performance evaluation (G-Mean = 0.1302). This ranking suggests that operational and governance-related deficiencies are perceived as more pressing than human capital or evaluation system issues, although all remain structurally interconnected.

³⁴ D Patasik, Irwan R Rahim, and S Hamzah, "Comparative Study of Delay Factors in Construction Projects in South Sulawesi (BUMN VS Private)," *Iop Conference Series Earth and Environmental Science* 1117, no. 1 (2022): 12019, <https://doi.org/10.1088/1755-1315/1117/1/012019>; Jemi P Tahirs, Siti Haerani, and Fauziah Umar, "The Influence of Leadership Commitment, Human Capital and Work Culture on Bureaucratic Performance Through Good Governance of Local Governments in South Sulawesi Province," *International Journal of Professional Business Review* 8, no. 9 (2023): e3443, <https://doi.org/10.26668/businessreview/2023.v8i9.3443>.

³⁵ Suryadi Lambali, "The Role of the Indigenous Knowledge System of the Community Model Intergovernmental Cooperation in Education Program Guide in the Province of South Sulawesi," *Iapa Proceedings Conference*, 2019, 351, <https://doi.org/10.30589/proceedings.2018.209>; Rahma Amin, Herlina Sulaiman, and Indriani Muin, "Patron Client in Political Corruption in Circles South Sulawesi BUMD ((Regional Owned Enterprises))," *Al-Amwal Journal of Islamic Economic Law* 9, no. 1 (2024): 18–35, <https://doi.org/10.24256/alw.v9i1.4897>.

Figure 2
ANP Results on Institutional Problem Priority



The prioritization of inadequate service quality as the most significant institutional constraint indicates a shared concern regarding the operational interface between zakat institutions and stakeholders, particularly muzaki and mustahik. Practitioners assign the highest weight to this issue (0.3192), reflecting their direct engagement with service delivery processes and day-to-day operational challenges. Regulators also attribute substantial importance to service quality (0.2500), while experts provide a moderately high assessment (0.1608). This convergence implies that inefficiencies in service responsiveness, accessibility, digital integration, and stakeholder engagement directly affect institutional credibility and ultimately influence zakat collection and distribution performance.

Weak organizational governance ranks second in the aggregated results (G-Mean = 0.2282). Experts assign relatively high weights to this issue (0.2213), as do regulators (0.2500), while practitioners provide a slightly lower yet still substantial evaluation (0.1840). This pattern reflects a broad recognition that structural governance challenges—such as unclear decision-making hierarchies, limited strategic planning, insufficient internal controls, and weak coordination mechanisms—undermine institutional effectiveness. From a systemic governance perspective, organizational weakness not only constrains internal performance but also limits institutional capacity to align with regulatory frameworks and societal expectations.

Low transparency and accountability occupy the third position (G-Mean = 0.2176), though perceptual variation is evident. Practitioners assign a relatively high weight (0.3192), suggesting that transparency challenges are experienced concretely in operational contexts, particularly in reporting, financial disclosure, and stakeholder communication. Experts also rate this issue highly (0.2213), whereas regulators assign a lower weight (0.1250). This divergence may reflect institutional self-assessment bias within the regulatory domain, while external stakeholders perceive accountability gaps as more consequential. Conceptually, transparency functions as a mediating variable between institutional governance and public trust; therefore, deficiencies in this area may indirectly suppress community participation and zakat compliance.

Limited amil competence ranks fourth (G-Mean = 0.1775). Regulators assign the highest weight to this issue (0.2500), followed by experts (0.1753), while practitioners provide a comparatively lower assessment (0.1093). This distribution suggests that regulators view human capital limitations as a structural bottleneck, possibly linked to certification standards, professional training, and competency development. Practitioners' lower weighting may indicate adaptive operational strategies that partially compensate for competence gaps, or a perception that systemic governance issues outweigh individual skill deficiencies. Nevertheless, human resource capacity remains a foundational element in sustaining institutional reform and service improvement.

Finally, weak institutional performance evaluation receives the lowest aggregate priority (G-Mean = 0.1302), although experts assign it a relatively high weight (0.2213) compared to regulators (0.1250) and practitioners (0.0683). This pattern indicates that academic stakeholders place greater emphasis on the importance of monitoring, impact measurement, and evidence-based evaluation frameworks. In contrast, practitioners may perceive evaluation systems as secondary to immediate operational concerns. However, from a strategic governance standpoint, the absence of robust performance evaluation mechanisms may hinder long-term institutional learning, accountability enhancement, and policy optimization.

The sub-cluster analysis overall demonstrates that institutional challenges in zakat governance are multidimensional yet hierarchically structured. Operational service quality and governance architecture emerge as the most pressing constraints, while competence development and performance evaluation function as enabling factors that sustain systemic improvement³⁶. Within the broader Triple Helix framework, strengthening institutional

³⁶ Suroso I Zadjuli, Atina Shofawati, and Muryani Muryani, "Implementing Good Corporate Governance in Zakat Institution," *Bussecon Review of Social Sciences* (2687-2285) 2, no. 1 (2020): 27–37, <https://doi.org/10.36096/brss.v2i1.158>; Anwar A Shikur and Siti Maysyaroh, "Review on Zakat Core Principles (ZCP) Literatures," *Islamic Social Finance* 3, no. 1 (2023), <https://doi.org/10.58968/isf.v3i1.234>.

performance requires integrated reform that simultaneously enhances governance structures, service delivery mechanisms, transparency systems, human capital capacity, and evaluation frameworks³⁷. These findings reinforce the earlier conclusion that institutional reform constitutes the primary lever for improving zakat performance in South Sulawesi, as weaknesses at this level generate cascading effects across governmental alignment and community engagement³⁸.

Community Problem Priority

The ANP results for the sub-cluster of Community Problems provide important insights into the societal factors constraining zakat performance in South Sulawesi. By disaggregating community-related constraints into three specific dimensions, the analysis highlights both convergent and divergent stakeholder perceptions. The geometric mean (G-Mean) establishes a clear hierarchy among the identified issues. At the aggregate level in Figure 3, low public zakat literacy emerges as the most critical community-related constraint (G-Mean = 0.5578), followed by the limited role of religious leaders and public figures (G-Mean = 0.2631), and finally the preference for alternative donation channels (G-Mean = 0.1790). The substantial weight assigned to zakat literacy indicates that cognitive and informational deficits within society are perceived as the dominant social barrier affecting zakat performance.

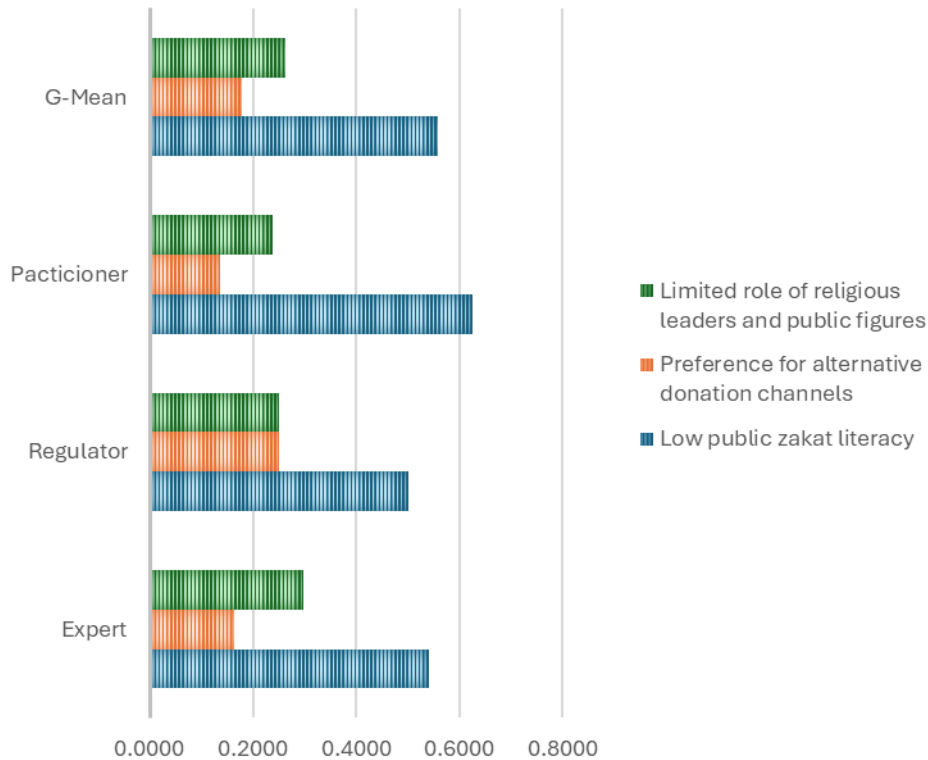
Low public zakat literacy receives consistently high weights across all stakeholder groups—experts (0.5396), regulators (0.5000), and practitioners (0.6250)—demonstrating strong consensus. Practitioners assign the highest weight, likely reflecting their direct interaction with muzaki and mustahik, where misunderstandings regarding zakat obligations, calculation methods, distribution mechanisms, and institutional roles are frequently encountered. Experts similarly emphasize literacy as a structural determinant, recognizing that insufficient knowledge undermines compliance behavior and weakens institutional trust. Regulators' high assessment further suggests awareness that policy frameworks alone are insufficient without adequate public understanding. Conceptually, zakat literacy functions as a foundational variable shaping attitudes, trust, and participation; deficiencies at this level can systematically

³⁷ Moch Chotib, Muhammad Fauzudin Faiz, and Ikhsan Abdullah, "Establishing a Zakat Culture Based on Good Zakat Governance and Good Zakat Empowerment in Indonesia," *Journal of Islamic Economics Perspectives* 5, no. 2 (September 4, 2023): 1–11, <https://doi.org/10.35719/jiep.v5i2.121>; Siti Isnaniati, Beby H Agustin, and Ni M A Sriwathi, "Zakat Governance in Lazisnu Kediri District," *Icobuss* 3, no. 1 (2023): 41–50, <https://doi.org/10.24034/icobuss.v3i1.342>.

³⁸ Fadilah et al., "Performance Measurement of Zakat Utilization: The Effectiveness of Zakat Distribution"; Ram Al Jaffri Saad and Abubakar Umar Farouk, "A Comprehensive Review of Barriers to a Functional Zakat System in Nigeria," *International Journal of Ethics and Systems* 35, no. 1 (2018): 24–42, <https://doi.org/10.1108/ijoes-06-2018-0090>.

limit collection performance regardless of institutional or regulatory improvements.

Figure 3
ANP Results on Community Problem Priority



The limited role of religious leaders and public figures ranks second (G-Mean = 0.2631), with relatively balanced weights across experts (0.2970), regulators (0.2500), and practitioners (0.2385). This distribution indicates moderate consensus that influential social actors have not been optimally mobilized to strengthen zakat awareness and compliance. In the socio-religious context of South Sulawesi, religious leaders and community figures hold normative authority capable of shaping moral commitment and collective behavior. Their limited engagement may reduce the persuasive power of institutional campaigns and weaken social reinforcement mechanisms. From a governance perspective, this finding underscores the importance of integrating informal authority structures into formal zakat governance strategies, thereby enhancing legitimacy and outreach effectiveness.

The preference for alternative donation channels ranks third (G-Mean = 0.1790), receiving comparatively lower weights from experts (0.1634) and

practitioners (0.1365), while regulators assign a slightly higher value (0.2500). This suggests that although alternative channels—such as direct giving to beneficiaries or informal charitable networks—exist, they are not perceived as the primary obstacle to zakat performance. Rather, such preferences may be symptomatic of underlying literacy and trust issues. If individuals lack understanding of institutional zakat mechanisms or question institutional transparency, they may gravitate toward informal channels perceived as more immediate or personally controlled. Thus, alternative donation behavior may be endogenous to broader institutional and informational weaknesses.

The sub-cluster analysis overall demonstrates that institutional challenges in zakat governance are multidimensional yet hierarchically structured. Operational service quality and governance architecture emerge as the most pressing constraints, while competence development and performance evaluation function as enabling factors that sustain systemic improvement³⁹. Within the broader Triple Helix framework, strengthening institutional performance requires integrated reform that simultaneously enhances governance structures, service delivery mechanisms, transparency systems, human capital capacity, and evaluation frameworks⁴⁰. These findings reinforce the earlier conclusion that institutional reform constitutes the primary lever for improving zakat performance in South Sulawesi, as weaknesses at this level generate cascading effects across governmental alignment and community engagement⁴¹.

Government Problem Priority

The ANP results for the sub-cluster of Government Problems provide a more detailed perspective on structural and policy-related constraints affecting zakat performance in South Sulawesi. By decomposing the governmental

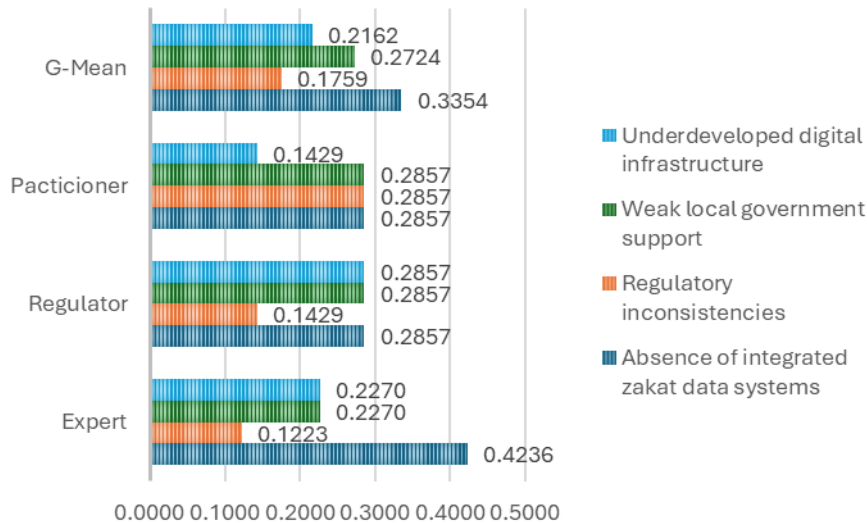
³⁹ Azlan Md Thani et al., "Determinants of Zakat Payment: The Viewpoint of Stakeholders in Seremban," *Information Management and Business Review* 16, no. 3(1)S (2024): 880–87, [https://doi.org/10.22610/imbr.v16i3\(i\)s.3910](https://doi.org/10.22610/imbr.v16i3(i)s.3910); Ahmad Ajib Ridlwan et al., "Does Gender Influence Zakat Compliance Among Indonesian Muslim Entrepreneurs? A Multi-Group Analysis," *Journal of Islamic Accounting and Business Research*, 2025, <https://doi.org/10.1108/jiabr-01-2024-0040>.

⁴⁰ Raudah Danila, Rafeah Mat Saat, and Ku Maisurah Ku Bahador, "Trust and Religiosity: Integrating Technological Acceptance Factors Into the Extended Unified Theory of Acceptance and Use of Technology (UTAUT) Model for Zakat Online Payment Systems," *Journal of Advanced Research in Applied Sciences and Engineering Technology* 53, no. 2 (2024): 199–214, <https://doi.org/10.37934/araset.53.2.199214>; Teh Suhaila Tajuddin, "An Analysis of Business Zakat Reporting in Islamic Banking Institutions: Evidence From Malaysia, Indonesia and Brunei," *International Journal of Islamic Economics and Finance Research* 7, no. 1 July (2024): 74–95, <https://doi.org/10.53840/ijiefer157>.

⁴¹ Aminudin Ma'rif et al., "Zakat Development Towards Sustainable Economic Growth," *Eksyar Jurnal Ekonomi Syari Ah & Bisnis Islam* 9, no. 2 (2022): 158–72, <https://doi.org/10.54956/eksyar.v9i2.389>.

dimension into four specific issues, the analysis reveals differentiated stakeholder assessments while establishing an aggregate priority structure based on the geometric mean (G-Mean).

Figure 4
ANP Results on Government Problem Priority



At the aggregate level in Figure 4, the absence of integrated zakat data systems emerges as the most critical government-related constraint (G-Mean = 0.3354), followed by weak local government support (G-Mean = 0.2724), underdeveloped digital infrastructure (G-Mean = 0.2162), and regulatory inconsistencies (G-Mean = 0.1759). This ordering indicates that systemic coordination and data integration issues are perceived as more consequential than purely normative or regulatory fragmentation.

The absence of integrated zakat data systems receives the highest aggregate priority, with experts assigning a particularly strong weight (0.4236), while regulators and practitioners each assign 0.2857. This pattern suggests that academic stakeholders are especially sensitive to the importance of data integration for evidence-based policymaking, performance monitoring, and strategic planning. Fragmented or siloed data systems can hinder accurate identification of muzaki and mustahik, reduce distribution efficiency, and limit the capacity to evaluate impact. From a governance standpoint, the lack of integrated data weakens inter-institutional coordination and obstructs the development of a coherent zakat ecosystem. Within a Triple Helix framework, data fragmentation undermines not only governmental oversight but also institutional planning and community trust, as transparency and accountability increasingly depend on digital traceability.

Weak local government support ranks second (G-Mean = 0.2724), with regulators and practitioners assigning equal weights (0.2857) and experts slightly lower (0.2270). This relative convergence indicates broad recognition that local governmental engagement plays a pivotal role in facilitating zakat optimization. Support may include budgetary allocation, policy alignment, administrative facilitation, and integration with regional development programs. Insufficient local government involvement can create implementation gaps between national-level regulations and regional execution. Consequently, zakat governance may lack the political and administrative backing necessary for systemic expansion and institutional strengthening.

Underdeveloped digital infrastructure occupies the third position (G-Mean = 0.2162). Regulators again assign a relatively high weight (0.2857), followed by experts (0.2270), while practitioners provide a lower assessment (0.1429). This distribution suggests that policymakers and analysts recognize digital infrastructure as a strategic enabler of modern zakat governance, particularly in relation to data integration, service delivery, financial reporting, and stakeholder engagement. Practitioners' comparatively lower weighting may reflect adaptive operational strategies that mitigate infrastructure limitations at the field level. Nevertheless, from a structural perspective, inadequate digital infrastructure constrains scalability, efficiency, and real-time monitoring capabilities.

Regulatory inconsistencies rank fourth in the aggregate hierarchy (G-Mean = 0.1759), although practitioners assign a relatively higher weight (0.2857) compared to experts (0.1223) and regulators (0.1429). This divergence indicates that operational actors experience regulatory ambiguity or overlapping mandates more directly in practice. Practitioners may encounter inconsistencies between national regulations, local policies, and institutional guidelines that complicate compliance and coordination. Regulators' lower weighting may reflect institutional familiarity with the regulatory framework, while experts may interpret regulatory issues as secondary relative to structural data and coordination problems. Conceptually, this finding suggests that while regulatory coherence remains important, it is not perceived as the most immediate governmental bottleneck compared to systemic integration challenges.

Overall, the ANP sub-cluster analysis demonstrates that government-related constraints in zakat governance are primarily structural and systemic rather than purely normative. The prominence of data integration and local government support underscores the importance of coordination capacity and institutional alignment in improving zakat performance ⁴². Within the broader

⁴² M K Hassan et al., "The National-Level Potential of Zakat and Its Integration into the Fiscal Framework: Sector-Specific Insights from the Economy of Bangladesh," *International Journal of*

Triple Helix governance model, governmental weaknesses—particularly in data systems and infrastructural support—can amplify institutional inefficiencies and limit community engagement. Therefore, strengthening integrated digital ecosystems, enhancing local governmental commitment, and improving inter-regulatory coherence are essential components of a comprehensive strategy to optimize zakat governance in South Sulawesi.

Conclusion

This study set out to identify and prioritize the key problems and corresponding solutions affecting zakat performance in South Sulawesi through a multi-stakeholder ANP approach embedded within a Triple Helix governance framework. By systematically incorporating the perspectives of experts, regulators, and practitioners, the analysis provides an integrated and evidence-based prioritization of constraints and reform strategies across institutional, community, and governmental domains. At the problem-cluster level, institutional issues emerged as the most critical constraint to zakat performance, followed by governmental and community problems. This hierarchy indicates that systemic weaknesses within zakat institutions—particularly those related to governance architecture, service quality, transparency, and managerial capacity—constitute the primary bottleneck in optimizing collection and distribution outcomes.

Although community and governmental challenges remain significant, they appear structurally interconnected with institutional performance. In particular, deficiencies in institutional credibility and operational effectiveness generate spillover effects that influence public trust, compliance behavior, and policy implementation. The sub-cluster analyses provide further nuance. Within the institutional domain, inadequate service quality, weak organizational governance, and low transparency and accountability were identified as the most pressing constraints. These findings underscore that zakat underperformance is not merely a resource issue but fundamentally a governance and credibility challenge. In the community domain, low public zakat literacy emerged as the dominant societal barrier, highlighting the central role of knowledge and awareness in shaping compliance and participation. Meanwhile, within the governmental domain, the absence of integrated data systems and weak local government support were identified as structural impediments, pointing to coordination and systemic integration deficits.

This study generates important theoretical, methodological, and practical implications for strengthening zakat governance within a Triple Helix

Islamic and Middle Eastern Finance and Management 17, no. 1 (2024): 146–69, <https://doi.org/10.1108/IMEFM-09-2023-0313>; S Rasanjani, "Zakat as a Local Revenue in Aceh: A Dynamics of Policy Implementation in the Local Realm," *Jurnal Ilmiah Al-Syir'ah* 19, no. 2 (2021): 200–217, <https://doi.org/10.30984/jis.v19i2.1659>.

framework. Theoretically, the findings contribute to the Islamic social finance literature by advancing a systemic governance perspective. Rather than treating zakat underperformance as a purely technical or resource-based issue, the study demonstrates that governance architecture, regulatory coherence, and societal trust are structurally interdependent. By embedding the analysis within a Triple Helix framework, the research highlights the dynamic interaction between academia (experts), government (regulators), and industry (practitioners), reinforcing the relevance of multi-actor governance models in Islamic philanthropic institutions. Methodologically, this study confirms the robustness of the Analytic Network Process (ANP) in capturing interdependencies among institutional, community, and governmental variables. The integration of inconsistency and rater agreement tests strengthens the reliability of multi-stakeholder prioritization, offering a replicable model for similar governance studies in other regions.

Several limitations should be acknowledged. First, the study focuses exclusively on South Sulawesi, limiting the generalizability of findings to other provinces with different socio-economic and institutional characteristics. Second, the ANP model relies on expert judgment, which, despite strong consistency and agreement validation, remains inherently subjective. Third, the study captures stakeholder perceptions at a single point in time, without incorporating longitudinal data to assess dynamic governance changes. Finally, the model emphasizes prioritization rather than empirical impact measurement, leaving the causal effectiveness of proposed solutions untested.

Future studies may expand the geographical scope to conduct comparative inter-provincial or national-level analyses to examine whether governance priorities differ across contexts. Longitudinal research is also recommended to evaluate the effectiveness of implemented reforms over time. Additionally, integrating quantitative performance data—such as collection growth, distribution efficiency, and beneficiary impact metrics—would allow for hybrid modeling that combines perception-based prioritization with outcome-based validation. Future research could also explore digital governance innovations, behavioral economics approaches to zakat compliance, and the integration of zakat within broader Islamic social finance ecosystems, thereby deepening the systemic understanding of sustainable zakat optimization.

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