

Data-Driven Prioritization of Productive Zakat Distribution: Evidence from Poverty and Social Assistance Gaps in East Java

Prioritisasi Penyaluran Zakat Produktif Berbasis Data: Bukti dari Kesenjangan Kemiskinan dan Bantuan Sosial di Jawa Timur

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Abstract: This study develops a priority model for productive zakat distribution by aligning poverty data with gaps in government assistance in East Java, Indonesia. Using a quantitative evaluative approach, we analyzed secondary data from 38 districts/municipalities, focusing on poverty rates and the number of food aid beneficiaries. A composite scoring model was constructed, assigning higher weight to poverty (60%) and lower weight to social aid coverage (40%) to identify underserved regions. Findings show a significant mismatch between poverty levels and government assistance allocation, with areas like Sampang, Bangkalan, and Sumenep having high poverty but limited aid coverage. This highlights the urgency of data-driven zakat targeting to address distribution inefficiencies. The proposed scoring model ranks districts transparently, offering a replicable tool for local zakat institutions. Integrating public data sources—such as BAZNAS reports and BPS statistics—into zakat planning can enhance precision, transparency, and social justice. The study contributes methodologically to Islamic social finance and offers practical policy implications to support national zakat governance and Sustainable Development Goals (SDGs). Future research is encouraged to enrich the model by incorporating multidimensional indicators and validating outcomes in broader contexts.

Keywords: Productive zakat, Poverty alleviation, Social assistance, Data-driven policy, East Java.

Abstrak: Penelitian ini mengembangkan model prioritas penyaluran zakat produktif dengan menyelaraskan data kemiskinan dan celah bantuan sosial di Provinsi Jawa Timur. Dengan pendekatan kuantitatif evaluatif, studi ini menganalisis data sekunder dari 38 kabupaten/kota berdasarkan tingkat kemiskinan dan jumlah penerima bantuan pangan. Model skoring komposit dibangun dengan bobot 60% untuk kemiskinan dan 40% untuk cakupan bantuan sosial guna mengidentifikasi wilayah yang paling membutuhkan. Hasilnya menunjukkan ketidaksesuaian antara tingkat kemiskinan dan distribusi bantuan pemerintah. Wilayah seperti Sampang, Bangkalan, dan Sumenep memiliki kemiskinan tinggi namun cakupan bantuan rendah, menandakan pentingnya strategi zakat berbasis data. Model ini mampu merangking wilayah secara transparan dan dapat direplikasi oleh lembaga zakat daerah. Integrasi data publik—seperti laporan BAZNAS dan statistik BPS—dalam perencanaan zakat dapat meningkatkan ketepatan, akuntabilitas, dan keadilan sosial. Studi ini berkontribusi secara metodologis terhadap keuangan sosial Islam dan memberikan implikasi kebijakan praktis untuk mendukung tata kelola zakat nasional dan pencapaian Tujuan Pembangunan Berkelanjutan (TPB/SDGs). Penelitian selanjutnya disarankan untuk memperkaya model ini dengan indikator multidimensional dan validasi lintas wilayah.

Kata kunci: Zakat produktif, Pengentasan kemiskinan, Bantuan sosial, Kebijakan berbasis data, Jawa Timur.

I. INTRODUCTION

Zakat, one of the five pillars of Islam, has long been recognized as a pivotal instrument for achieving economic justice, alleviating poverty, and empowering communities in Muslim societies

(Ahmed, 2004; Hassan & Khan, 2007; Wahid, 2018). In its modern practice, zakat has evolved from mere consumptive relief into a more sustainable model known as productive zakat, which emphasizes economic empowerment through capital provision, skills development, and microenterprise support (Ascarya, 2020; Khairi et al., 2022). This shift has gained traction among scholars and policymakers, particularly in addressing persistent and multidimensional poverty, especially in developing countries like Indonesia (Obaidullah, 2016; Huda et al., 2020; Mohd Ali et al., 2023).

Indonesia, home to the world's largest Muslim population, has formalized zakat governance through institutions like BAZNAS and LAZ. Despite consistent growth in zakat collection—reaching over Rp 22.7 trillion in 2023 (BAZNAS, 2024)—its distribution often relies on manual mechanisms that lack strategic targeting. As a result, productive zakat remains underutilized, and many high-poverty areas receive inadequate support. East Java exemplifies this challenge. Although it is one of the most populous provinces, recent statistics from BPS Jatim (2024) reveal disparities between poverty levels and the distribution of social assistance, including food aid. These mismatches expose inefficiencies not only in government-led welfare programs but also in Islamic philanthropic channels.

Empirical studies suggest that zakat distribution frequently fails to reach the most vulnerable populations due to historical, administrative, and political factors (Masyita & Ahmed, 2013; Aziz et al., 2021). Moreover, the lack of integration between zakat and government assistance has resulted in overlaps in some regions and exclusion in others—undermining the broader goal of equitable and efficient poverty alleviation (Fauzi & Yusof, 2020; Rini, 2022). This fragmentation calls for harmonized planning and validation mechanisms that bridge the gap between Islamic social finance and state welfare systems.

In response to this challenge, scholars have recommended need-based targeting, geographic prioritization, and integration of poverty mapping with socioeconomic indicators (Wahab & Rahman, 2011; Ibrahim et al., 2013; Tohirin, 2021). However, most approaches remain evaluative and localized, lacking scalable, regional-level frameworks that can inform actionable policy. The absence of interoperable data systems between zakat institutions and public databases continues to limit program efficiency and accountability (KNEKS, 2023; Ali et al., 2022).

This study addresses the gap by proposing a composite scoring model to prioritize productive zakat distribution across East Java's 38 districts/cities. The model uses two publicly available indicators—poverty rate and the number of food assistance beneficiaries (KPM)—and applies a linear weighting approach to identify regions with high needs but low state intervention. These are precisely the areas where productive zakat can deliver maximum marginal impact. The conceptual foundation of this model draws from spatial equity theories and multidimensional poverty targeting frameworks (Alkire & Foster, 2011; Santos & Ura, 2018), while also aligning with emerging Islamic finance literature that advocates for the application of GIS, MCDM, and data-driven tools in zakat management (Huda et al., 2020; Pratama & Riyadi, 2022).

Unlike prior studies that depend on survey-based or qualitative assessments, this research utilizes standardized, high-resolution secondary data from BPS Jatim (2024), ensuring transparency, replicability, and policy relevance. The scoring method is intentionally kept simple to enhance usability among local zakat stakeholders with limited technical resources (Kholid & Baharuddin, 2020). It also reinforces national policy directions—such as those promoted by KNEKS and BAZNAS—for digitalizing zakat services and aligning them with Sustainable Development Goals (SDGs).

By ranking regions based on composite scores, this model serves as a practical tool to improve targeting precision, promote institutional accountability, and guide evidence-based zakat programming. The study's novelty lies in its integration of public datasets into Islamic philanthropy, application of macro-micro analytics, and focus on replicable, region-wide planning. In doing so, it contributes to the advancement of Islamic social finance and provides actionable insights for policymakers seeking to optimize zakat's role in achieving sustainable poverty reduction.

II. LITERATURE REVIEW

2.1 Productive Zakat and Needs-Based Approach

Productive zakat refers to zakat distribution that goes beyond consumptive relief and aims to economically empower mustahik through skills training, working capital, or production facilities. This long-term approach has proven effective in enhancing microenterprise resilience and household income

sustainability (Obaidullah, 2016; Alim & Nugroho, 2022). Ascarya (2020) highlights that productive zakat, if based on accurate needs profiling, can serve as a strategic tool for poverty alleviation.

In the Indonesian context, BAZNAS (2023) has initiated productive zakat programs using digital profiling tools such as SI-MUSTAHIK to assess socio-economic conditions and determine appropriate interventions. These programs emphasize business mentoring, asset provision, and financial literacy, and demonstrate how institutional digitalization can enhance zakat impact at scale.

Furthermore, the needs-based approach is central to productive zakat success. Wahab and Rahman (2011) argue that equal distribution without accounting for socioeconomic vulnerability leads to inefficiency and inequality. Instead, distribution should be concentrated in poverty-dense areas with minimal government support. This principle aligns closely with the maqashid al-shariah, particularly in protecting wealth (hifz al-mal) and dignity of beneficiaries.

Idris et al. (2020) and Fauzi et al. (2021) emphasize the role of geo-mapping and data governance to enhance targeting accuracy. Recent evaluations by LAZISMU (2022) also show that localized profiling and needs assessment tools significantly improve empowerment outcomes and program sustainability.

2.2 Intervention Inequality and Mustahik Target Validation

Several studies confirm that zakat distribution is highly dependent on the accuracy of mustahik targeting. Masyita and Ahmed (2013) highlight that distribution without valid socioeconomic data often results in either duplication with government assistance or exclusion of eligible recipients. Rini (2022) supports this argument and stresses the importance of integrating poverty and social assistance datasets to enhance distribution efficiency.

Aziz et al. (2020) recommend dynamic verification systems and real-time updating of mustahik registries to reduce exclusion and inclusion errors. Responding to this challenge, BAZNAS (2022) has developed the PUSAKA system (Pusat Data Zakat Nasional), which integrates national poverty data with internal zakat recipient databases. This facilitates more transparent and targeted zakat allocation, reducing the risk of inefficiency across distribution channels.

2.3 Synergy Between Zakat and Government Programs

Synergy between zakat institutions and state welfare programs has emerged as a strategic policy agenda in Indonesia's Islamic social finance ecosystem. According to KNEKS (2023), cross-institutional data integration is essential to ensure that social interventions are complementary and non-redundant. In the East Java context, KPM (Keluarga Penerima Manfaat) data and food assistance budgets managed by local governments can serve as benchmarks for zakat institutions to develop more responsive strategies.

Ismail and Shaikh (2017) emphasize the need for coordination mechanisms between zakat managers and public sector agencies. Practical efforts have emerged, such as pilot projects by BAZNAS Jatim and select LAZs that synchronize beneficiary data through joint dashboards with local governments. These collaborations show tangible potential to improve targeting precision and resource efficiency.

2.4 Data-Based Regional Priority Models

Quantitative approaches to determining regional zakat priorities have gained momentum in recent years. Huda et al. (2020) advocate the use of composite scoring—combining poverty data with intervention coverage metrics—to support more precise allocation. Similarly, Rahman et al. (2022) show that leveraging big data tools and automated dashboards improves accuracy, transparency, and institutional responsiveness.

In practice, BAZNAS (2023) has piloted the use of geospatial mapping and real-time dashboards to prioritize districts for productive zakat allocation. These innovations underscore the relevance of integrating official datasets, such as BPS and DTKS (Data Terpadu Kesejahteraan Sosial), into Islamic philanthropy planning. This study adopts a comparable strategy by using poverty rates and KPM coverage data to score and rank 38 districts in East Java.

2.5 Literature Gap and Research Contribution

Although literature on productive zakat has expanded, most studies still focus on program-level evaluations or single-institution case studies. Few have used standardized regional statistics to build systematic models for priority area selection.

This research fills that gap by applying a documentary quantitative approach using BPS East Java data to construct a composite scoring model. The model is designed to be simple, scalable, and applicable across districts, making it suitable for practical use by zakat institutions at the local level.

Furthermore, Kamarudin et al. (2021) underscore the need for standardized, interoperable methodologies for regional zakat planning. This study directly addresses that need by presenting a replicable model that enhances integration, transparency, and policy relevance in zakat distribution—bridging the divide between theoretical propositions and practical implementation in the field.

III. MATERIALS AND METHODS

3.1 Research Type and Approach

This study adopts a descriptive-evaluative design with a documentary quantitative method, aimed at developing a replicable scoring model for prioritizing productive zakat distribution. The approach integrates secondary data analysis and weighted scoring, aligning zakat targeting with empirically mapped socioeconomic needs. This methodological choice is grounded in the belief that evidence-based zakat allocation will lead to more efficient and impactful poverty alleviation (Ascarya, 2020; Wahab & Rahman, 2011). Documentary quantitative methods are increasingly adopted in zakat and social policy research due to their emphasis on objectivity, replicability, and efficient use of public datasets (Creswell & Creswell, 2018).

3.2 Data Sources

This study uses secondary data published by the Central Bureau of Statistics of East Java Province (BPS Jatim, 2024), which includes:

1. The percentage of poor population per regency/city, and
2. The number of Family Beneficiaries (KPM) of food aid programs and the related social budget, by regency/city.

These two datasets cover all 38 regencies/cities in East Java and are available in CSV format. Their institutional credibility and standardized structure make them ideal for systematic quantitative analysis. The integration of poverty and social aid data enables the study to evaluate both the level of socioeconomic deprivation and the intensity of government support, thus allowing for more balanced zakat distribution (Rini, 2022; Idris et al., 2020).

3.3 Data Analysis Techniques

The data analysis follows a four-stage process:

Stage 1: The poverty and KPM datasets are cleaned, tabulated, and ranked to identify regions with the highest poverty incidence and largest beneficiary counts, revealing inter-regional disparities.

Stage 2: The ratio of poverty percentage to KPM count is computed for each district as a proxy for undercoverage in food assistance programs. A high ratio indicates that a greater proportion of poor residents are not receiving support, highlighting potential zones for productive zakat intervention.

Stage 3: A composite scoring model is applied to generate zakat distribution priority indices. The formula is as follows:

$$\text{Priority Score} = (P \times 0.6) + \left(\frac{K}{100.00} \times 0.4\right)$$

Where:

- P = Poverty Percentage
- K = KPM Count
- 0.6 = Weight for Poverty (Need-based indicator)
- 0.4 = Weight for KPM (Intervention coverage)

100,000 = Normalization constant for KPM data

The use of a 0.6:0.4 weight reflects the greater emphasis on poverty level while still incorporating government coverage. This approach is consistent with previous social targeting models that prioritize multidimensional need and coverage gaps (Huda et al., 2020; Fauzi et al., 2021).

Stage 4: The final scores are visualized using a horizontal bar chart to aid interpretation. This visual representation allows policymakers and zakat managers to clearly see which regions should be prioritized, supporting evidence-based planning (Alim & Nugroho, 2022).

3.4 Priority Criteria

Regions with the highest composite scores are classified as top priorities for productive zakat distribution. These are areas where poverty is high and social assistance coverage is low, indicating severe intervention gaps. The model not only facilitates cross-regional comparison, but also offers a scalable and replicable framework adaptable to various regional contexts. This helps local zakat institutions align Islamic social finance with public welfare goals, in line with literature on synergy and targeting in social policy (Masyita & Ahmed, 2013; KNEKS, 2023).

3.5 Research Limitations

While the study offers a transparent and data-driven approach, it also has several limitations:

1. **Limited Indicators:** Only two indicators are used—poverty percentage and KPM count. Broader dimensions such as Human Development Index (HDI), zakat collection amounts, or per capita expenditure are excluded due to data unavailability at the subnational level.
2. **Spatial Granularity:** The study uses aggregate district-level data, which may obscure intra-regional inequalities. As a result, deprived sub-districts within relatively affluent areas might be overlooked (Hassan et al., 2019).
3. **Fixed Weights:** The model uses predetermined weights (0.6 for poverty, 0.4 for KPM). While these are theoretically justified, alternative weights might yield different prioritization results. Future studies could apply sensitivity analysis or Multi-Criteria Decision-Making (MCDM) approaches to enhance robustness.

Despite these limitations, this study makes a significant contribution by offering a replicable, transparent, and policy-relevant scoring model for productive zakat distribution. It exemplifies how open-access, regionally disaggregated data can be used to design efficient Islamic philanthropic interventions aligned with empirical social gaps and public accountability.

IV. RESULTS AND DISCUSSION

4.1. Results

a. Poverty Profile and Social Intervention

This study begins with a descriptive analysis of poverty incidence and the distribution of social assistance (KPM) across 38 districts in East Java for the year 2024. Based on official data from BPS, the highest poverty rates are concentrated in Madura and Tapal Kuda regions. Sampang (20.83%), Bangkalan (18.66%), Sumenep (17.78%), and Probolinggo (16.45%) are among the most deprived. These statistics highlight the need for complementary interventions such as productive zakat. Table 1 presents the respective poverty rates and KPM allocations.

Table 1. Poverty Rates and KPM in Districts/Municipalities of East Java, 2024

District/Municipality	Poverty Rate (%)	KPM Count
Sampang	20.83	343,884
Bangkalan	18.66	356,483
Sumenep	17.78	454,459
Probolinggo	16.45	513,344
Tuban	14.36	418,660
Bondowoso	12.60	417,661
Situbondo	12.42	370,122
Pamekasan	12.33	312,287
Ngawi	13.81	376,055
Pacitan	12.23	308,772

Source: Author's analysis

Interestingly, Jember (797,236), Malang (628,931), and Pasuruan (519,873) have the highest KPM recipient numbers. However, this volume does not always align proportionally with poverty levels. Cities like Surabaya and Batu—despite having low poverty rates—still receive significant food assistance, suggesting potential inefficiencies in resource targeting.

Disparities between poverty rates and KPM allocation indicate systemic undercoverage in high-need areas. These mismatches create strategic entry points for productive zakat. Rini (2022) argues that poor targeting—whether overlapping or insufficient—reduces the effectiveness of both state and religious social protection systems.

These findings are consistent with previous literature that urges zakat institutions to use region-specific poverty mapping to improve allocation precision (Wahab & Rahman, 2011; Idris et al., 2020).

b. Poverty-to-KPM Ratios

To evaluate the extent of government aid coverage, we calculate the ratio of poor individuals per 1,000 KPM recipients. This metric reflects the relative undercoverage across districts. Sampang (60.6) and Bangkalan (52.3) show the most pronounced gaps, followed by Sumenep (39.1), Ngawi (36.7), and Bondowoso (30.2).

Table 2. Poverty-to-KPM Ratio in Selected Districts

District/Municipality	Poverty Rate (%)	KPM Count	Poverty-to-KPM Ratio (per 1,000)
Sampang	20.83	343,884	60.6
Bangkalan	18.66	356,483	52.3
Sumenep	17.78	454,459	39.1
Ngawi	13.81	376,055	36.7
Bondowoso	12.60	417,661	30.2

Source: Author's analysis

These elevated figures underscore the need for additional aid in the form of productive zakat, as the current level of government support is insufficient relative to poverty levels. These results reaffirm the conclusions of Ascarya (2020) and Hassan et al. (2019), who argued that effective poverty alleviation through zakat must be responsive to coverage inefficiencies within existing governmental programs.

c. Priority Scoring for Zakat Distribution

A composite scoring model was constructed to identify regional zakat priorities. The formula is expressed as:

$$Priority\ Score = (P \times 0.6) + \left(\frac{K}{100.00} \times 0.4\right)$$

Where:

Poverty Rate = percentage of poor population in the region,

KPM Count = total number of government food assistance recipients,

The factor 0.6 reflects the priority weight of poverty incidence,

The factor 0.4 reflects the current government intervention level (KPM),

The 100,000 denominator is used to normalize the KPM variable for comparability.

Table 3. Zakat Distribution Priority Scores in East Java, 2024

District/Municipality	Poverty Rate (%)	KPM Count	Priority Score
Sampang	20.83	343,884	18.50
Sumenep	17.78	454,459	18.39
Probolinggo	16.45	513,344	18.27
Bangkalan	18.66	356,483	17.58
Trenggalek	13.91	444,122	16.84
Ngawi	13.81	376,055	15.34
Bondowoso	12.60	417,661	15.26
Situbondo	12.42	370,122	14.51
Pamekasan	12.33	312,287	13.63
Pacitan	12.23	308,772	13.52

Source: Author's analysis

Sampang again ranks highest with a score of 18.50, followed closely by Sumenep (18.39), Probolinggo (18.27), and Bangkalan (17.58). This quantitative model enables zakat institutions to rank areas based on urgency and coverage needs, thereby improving strategic targeting, as suggested by Huda et al. (2020) and Fauzi et al. (2021).

d. Visualization of Regional Priorities

To enhance understanding, a horizontal bar chart visualizes the composite scores of the top 10 priority districts. Sampang, Sumenep, and Probolinggo occupy the top tier. This visual tool aids stakeholders in identifying disparities and planning accordingly.

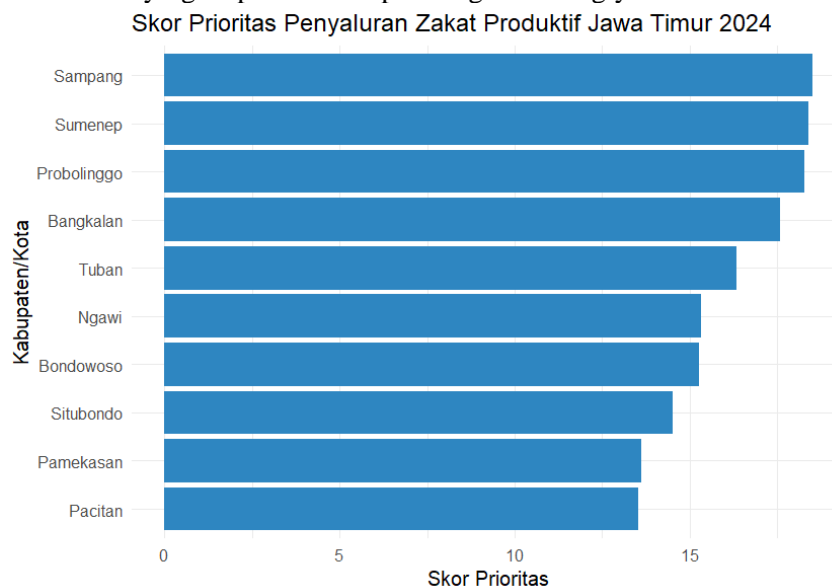


Figure 1. Priority Scores for Productive Zakat Distribution in East Java, 2024
Source: Author's analysis

This supports a more equitable and data-informed approach to zakat distribution that aligns with the principles of social justice and *maqāṣid al-sharī'ah*. The findings emphasize the utility of integrating official poverty and social assistance data into the allocation of Islamic social finance instruments. Such a framework can significantly enhance the impact and accountability of zakat institutions by enabling transparent and evidence-based distribution practices (KNEKS, 2023).

In summary, the results affirm the utility of a scoring-based, data-driven framework in identifying zakat distribution priorities. By integrating poverty statistics, intervention ratios, and visual analytics, the study promotes more targeted, transparent, and impactful Islamic social finance.

4.2 Discussion

a. Distribution Inequality and Needs Validation

This study identifies significant mismatches between poverty incidence and government food assistance allocations (KPM) in several districts of East Java. For example, Sampang, Bangkalan, and Sumenep register the highest poverty rates yet receive relatively lower proportions of food aid, as shown in their high poverty-to-KPM ratios (e.g., 60.6 in Sampang). Such disparities indicate undercoverage in state welfare systems, highlighting the strategic role of productive zakat in filling the gaps left by government assistance.

This finding resonates with Kholis and Mugiyati (2021), who investigated productive zakat distribution in Surabaya through revolving capital and equipment provision, demonstrating its effectiveness in reducing urban poverty. Moreover, an evaluation conducted by BAZNAS using the CIBEST model confirms that productive zakat enhances not only the material welfare but also the spiritual well-being of mustahik households (BAZNAS, 2017).

Validating mustahik needs through granular data has become increasingly crucial. Masyita and Ahmed (2013) stress that zakat distribution without accurate socio-economic targeting risks

duplication or undercoverage. Similarly, Rini (2022) argues that integrating poverty data with social assistance records is essential for achieving equitable and effective zakat allocation.

b. The Urgency of a Data-Based Approach

The scoring model introduced in this study presents a quantitative, evidence-based alternative to the equal distribution of zakat still commonly practiced in many institutions. It employs two core indicators—poverty rate and KPM count

Arif, Al Rieza, Khadijah, and Handoko (2025), in their systematic review of productive zakat models, identify diverse approaches—such as MSME empowerment, agriculture-based enterprises, livestock development, and educational entrepreneurship—that empirically reduce poverty and enhance social equity. Their review strengthens the case for data-driven prioritization methods like the one proposed here.

A key advantage of this model lies in its replicability and scalability. Since it relies on official public datasets (e.g., BPS and DTKS), the model can be applied to other provinces, updated periodically with new releases, and integrated into national zakat policymaking. This aligns with broader calls for systematic zakat governance (Ascarya, 2020; Wahab & Rahman, 2011).

c. Synergy Between Zakat and Government Programs

One of the strategic implications of this research is the potential for synergy between zakat institutions and government welfare programs. Aligning zakat distribution with state-published poverty and food assistance statistics enhances targeting accuracy and introduces a layer of transparency often absent in informal mechanisms.

The National Committee for Islamic Economy and Finance (KNEKS, 2023) stresses that integrating information systems across zakat institutions and public agencies is vital for maximizing the social impact of interventions. This study provides empirical support for such integration, using East Java as a practical case.

Field-based studies reinforce this perspective. Hidayah and Mulfi (2023) demonstrate in Banjarbaru that effective productive zakat management—beginning with mustahik verification and feasibility surveys—significantly optimizes household benefits. Similarly, Minarni, Slamet, and Munir (2025) show that adopting a pentahelix collaboration model (involving government, private sector, academia, civil society, and media) in Malang shifts zakat practice from a consumptive to a productive orientation.

Such synergy is critical not only for efficiency but also for sustainability and institutional legitimacy. Coordinated frameworks ensure that zakat complements national poverty alleviation strategies (e.g., PKH and BPNT), thereby positioning Islamic social finance as an integral component of public policy.

d. Strategic Implications for Zakat Institutions

The priority scoring model offers practical operational value for zakat managers and policymakers. Institutions like BAZNAS East Java can directly apply this framework to identify districts with the greatest need, such as Sampang, Sumenep, and Probolinggo, and design interventions tailored to local contexts. Potential programs include microenterprise financing, vocational training, and agricultural empowerment schemes.

Mawardi (2023) confirms that productive zakat initiatives significantly improve both economic growth and household welfare of mustahik, particularly when programs are aligned with local economic structures. By combining poverty incidence and existing aid coverage, the proposed model facilitates nuanced decision-making that balances need and resource efficiency.

Moreover, this approach supports evidence-based budget planning and program design, shifting deliberations within zakat boards from normative assumptions to empirical reasoning. This transformation in institutional behavior enhances transparency, strengthens public trust, and reinforces zakat's role as a legitimate tool of socioeconomic development (Hassan, Rabbani, & Abdulla, 2019).

e. **Limitations and Opportunities for Future Research**

Despite its contributions, this study acknowledges several limitations. First, the model uses only two indicators (poverty rate and KPM count), excluding multidimensional aspects such as HDI, per capita income, or zakat disbursement levels. Arif et al. (2025) recommend integrating a broader set of variables—including MSME performance and educational outcomes—to capture the complexity of poverty alleviation.

Second, reliance on district-level aggregate data risks overlooking intra-district disparities. Tools such as Geographic Information Systems (GIS) could provide finer-grained spatial analysis. Kholis and Mugiyati (2021) further suggest complementing quantitative models with qualitative methods to preserve cultural and social contexts in zakat targeting.

Third, the use of fixed weights (0.6 and 0.4) may not be universally optimal. Future studies should conduct sensitivity analyses or adopt Multi-Criteria Decision-Making (MCDM) frameworks to test alternative weighting schemes adaptable to local contexts.

Finally, future research should incorporate qualitative perspectives from mustahik and zakat officers to capture insights into perceptions of fairness, accessibility, and empowerment. Studies in Banjarbaru and Malang provide promising examples but remain limited in scale (Hidayah & Mulfi, 2023; Minarni et al., 2025).

Emerging opportunities also lie in digital transformation of zakat governance. Platforms such as mobile applications, real-time dashboards, and big data analytics can enhance transparency and accountability. Widiastuti et al. (2022) emphasize that digital integration of zakat with national welfare systems significantly broadens coverage and improves efficiency.

V. **CONCLUSION**

This study developed a transparent, data-driven scoring model to prioritize productive zakat distribution in East Java by integrating poverty incidence and government food assistance coverage. Using quantitative analysis of official data from 38 districts/municipalities, the research revealed significant mismatches between poverty levels and social aid allocation. Notably, Sampang, Bangkalan, and Sumenep emerged as high-poverty districts with insufficient government support, identifying them as priority zones for productive zakat interventions.

The scoring framework designed in this study offers a replicable, evidence-based tool for zakat authorities and Islamic social finance institutions to improve both efficiency and equity in fund distribution. By embedding official statistical data into decision-making, zakat can function as a complementary instrument to state welfare schemes, reducing duplication, addressing undercoverage, and filling structural gaps. Furthermore, the model's spatial prioritization approach promotes strategic resource allocation that fosters sustainable empowerment and resilience in vulnerable communities.

This study advances the literature on zakat-based poverty alleviation by presenting a quantitative, indicator-based methodology that aligns with contemporary policy recommendations on cross-sectoral data integration. The model demonstrates that zakat can be positioned as both a faith-driven obligation and a policy-relevant instrument for poverty reduction. Future research should extend this framework by integrating multidimensional indicators—such as HDI, household expenditure, and zakat disbursement records—and validating its practical application through field-based impact assessments and longitudinal studies.

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