

## Transforming hajj financial management in Indonesia: An integrated SSM-AHP approach

Achmad Iskandar Zulkarnain<sup>a\*</sup>, Noer Azam Achsani<sup>a</sup>, Mulya Sirega<sup>a</sup> and Irfan Syauqi Beik<sup>b</sup>

<sup>a</sup>School of Business IPB University, Indonesia

<sup>b</sup>Department of Islamic Economics, Faculty of Economics and Management, IPB University, Indonesia

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### ABSTRACT

This study examines the current challenges and strategic alternatives for developing strategies to improve Hajj fund management in Indonesia using Soft Systems Methodology (SSM) and Analytic Hierarchy Process (AHP). The research focuses on challenges faced by the Hajj Financial Management Agency (BPKH) in managing pilgrimage funds within a complex ecosystem of stakeholders and regulators. Through focus group discussions and quantitative analysis, the study identifies gaps in governance and institutional coordination following the transfer of fund management from the Ministry of Religious Affairs to BPKH. The research evaluates key strategies including investment policy development, internal control enhancement, leadership competency improvement, and technology adoption. Findings emphasize the need for a coordinating body to oversee investment policies and partnerships, while prioritizing public accountability and digital transformation to streamline processes. The study contributes to Islamic finance literature by providing insights into BPKH's specific challenges and optimization strategies. Recommendations include aligning investments with Islamic principles, strengthening controls against fund misuse, and prioritizing leadership competency in financial expertise and ethical integrity. These findings offer practical guidance for policymakers and Hajj fund management institutions in enhancing fund stewardship within Islamic finance principles.

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## 1. Introduction

The public interest in performing Hajj pilgrimage in Indonesia continues to increase annually. This growing interest in performing Hajj pilgrimage serves as one of the indicators, alongside the performance of BPKH (Hajj Financial Management Agency), with more professional management capacity through innovative investment policies. As a country with a large Muslim population, Indonesia has the largest Hajj quota allocation. According to Witjaksono et al. (2019), as of 2019, the number of Indonesian Muslims who had registered as prospective pilgrims and paid the Hajj initial deposit was estimated to reach 4,246,000 pilgrims, with an annual Hajj quota of 221,000, resulting in an average waiting period of 18-19 years. With such an extended waiting period, Hajj funds must be managed to avoid idleness and generate greater benefit values. This condition presents unique challenges and issues for the Indonesian Government in managing the accumulation of Hajj funds effectively, efficiently, transparently, and accountability. The Hajj pilgrimage departure queue in Indonesia depends on the registration process conducted by pilgrims through initial deposits made through Islamic banks that provide Hajj savings products. To prevent the misuse of these accumulated funds, the Hajj Financial Management Agency was established under Presidential Regulation number 110/2017 as an independent institution with full authority to manage Hajj finances and is directly accountable to the President through the Minister of Religion (Witjaksono et al., 2019). According to Law 34 of 2014 Article 1 Paragraph 1, Hajj finance encompasses all government rights and obligations that can be valued in monetary terms related to the organization of Hajj pilgrimage. Based on the agency's

\* Corresponding author.

E-mail address [achmadiskandar79@gmail.com](mailto:achmadiskandar79@gmail.com) (A. I. Zulkarnain)

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financial performance data, by the end of 2023, BPKH projects its managed funds to reach Rp165.94 trillion, representing approximately 99.97% of the established target. As of October 2023, the realization of these funds reached Rp163.31 trillion, or about 98.38% of the target. Moreover, the total assets reached Rp168 trillion, showing a 5 percent increase compared to 2021's assets of Rp160 trillion.

The development of Hajj finances conducted by BPKH through investment portfolios in Islamic securities, gold, direct investments, and other investments generates benefit values. After the Covid-19 period, the benefit value experienced a significant increase of up to 59.2% compared to the previous year, attributed to exchange rate differences and increased initial pilgrim deposits. Based on analysis by Ramadhan (2018), the stakeholders include Indonesian Hajj pilgrims, the President, the Ministry of Religious Affairs, the House of Representatives, the Supreme Audit Agency, Islamic banking institutions, financial and investment service institutions, business entities, and Islamic organizations. The management must consider various challenges including investment instrument variations (Jumali, 2018; Pratiwi et al., 2019), the high difference between BPIH and actual Hajj costs (Muneeza et al., 2018), and external factors such as macroeconomic conditions and exchange rates. From an Islamic law perspective, using the *maṣlahah* theory, the basic principles emphasize the necessity of protecting wealth as reflected in the principles of *maqāsid shariah*. Therefore, the management of Hajj funds must provide significant benefits for prospective pilgrims and the Muslim community in general. However, from BPKH's corporate perspective, the agency must implement good governance with a focus on its value chain, ensuring professional management and institutional performance accountability. As a relatively new entity, several areas require improvement regarding transparency in fund management, investment returns, public accessibility to information, bureaucratic complexity in the Hajj ecosystem, and Shariah law compliance. To achieve ideal conditions of Hajj financial management that must be transparent & accountable, with maximized investment returns, efficient bureaucracy and systems, and managed by professionals in their fields, it is necessary to develop a framework for Hajj financial management that can effectively fulfill the mandate of Law 34 of 2014, ultimately providing the greatest possible benefits for Indonesian citizens who wish to perform the Hajj pilgrimage.

Based on the complex background described above regarding Hajj financial management challenges in Indonesia, this research aims to provide a systematic and structured framework for Hajj financial management based on factual conditions and oriented towards optimization of Hajj finances as established objectives. A comprehensive overview of Hajj financial management by the Hajj Financial Management Agency (BPKH) needs to be formulated within a systemic and holistic design framework that addresses problematic situations in Hajj fund management, particularly concerning transparency, investment returns, public information accessibility, bureaucratic complexities in the Hajj ecosystem, and Shariah law compliance. The research strives to develop strategic alternatives and action plans in managing Hajj finances that effectively balance the aspects of regulation, corporate governance, and Islamic principles of *maṣlahah*. Through this comprehensive analysis and framework development, the study ultimately aims to contribute to the enhancement of Hajj pilgrimage implementation quality, rationality and efficiency in BPIH utilization, and benefits for the welfare of the Muslim community as mandated by Law 34/2014 Article 3.

## 2. Literature Review

### 2.1 Hajj Fund Management

The management of hajj funds represents a critical aspect of Islamic financial administration, particularly in countries with significant Muslim populations. Research by Jumali (2018) established that hajj fund management in Indonesia operates under the *wakalah* contract, allowing for infrastructure financing and other investments for fund development while adhering to Islamic principles. This framework emphasizes prudence, security, benefit value, risk management, and liquidity considerations. Muneeza et al. (2018) conducted a comparative analysis of hajj fund management institutions across Malaysia, Indonesia, and Maldives, revealing distinct characteristics in institutional forms, contracts, and investment instruments. Their research highlighted that Tabung Haji in Malaysia operates as a state-owned enterprise using *wadiah yad dhamanah* contracts with extensive portfolio diversification. In contrast, Indonesia's BPKH (Hajj Fund Management Agency) functions as a public legal entity using *wakalah* contracts, while Maldives employs a state-owned corporation model. Further research by Bakar et al. (2020) examined Tabung Haji Malaysia's role in ensuring sustainable Islamic finance through hajj savings mobilization and innovative Sharia investments. Their findings emphasized the importance of good governance and competency in managing political influence and external interventions that could potentially affect management decision-making.

### 2.2 Strategic Management and System Development

The development of organizational systems requires a comprehensive approach incorporating various strategic elements. Soetara et al. (2019) employed Soft Systems Methodology (SSM) to analyze and improve operational strategies, demonstrating the effectiveness of systematic approaches in organizational development. Their research emphasized the importance of stakeholder perspectives and systematic problem-solving approaches. In the context of financial institutions, Muturi et al. (2014) applied value

chain analysis to banking operations, revealing its utility in creating new strategies and markets for small-scale companies while maintaining competitiveness with high growth potential. Their findings underscore the importance of systematic analysis in financial institution development.

### 3. Method

#### 3.1 Research Design and Approach

This research employs both primary and secondary data collection methods. Primary data is obtained through specific research objectives from predetermined samples and respondents through focus group discussions (FGD), in-depth interviews, and questionnaires. Secondary data includes internal data from the Hajj Financial Management Agency (BPKH) and external data obtained from other institutions, books, journals, reports, and relevant BPKH website content. The study employs two main methodological approaches: Soft Systems Methodology (SSM) and Analytical Hierarchy Process (AHP). As outlined by Checkland and Poulter (2006), SSM comprises seven stages: Problem Situation Consideration, Problem Situation Expression, Root Definitions of Relevant Systems (including CATWOE analysis), Conceptual Models, Comparisons with Reality, Debate about Change, and Action Implementation. The systematic approach involves developing rich pictures and conceptual models to depict problematic situations and their solutions. Real-world thinking situation (epistemology) in the process of making conceptual models is shown in Fig. 1.

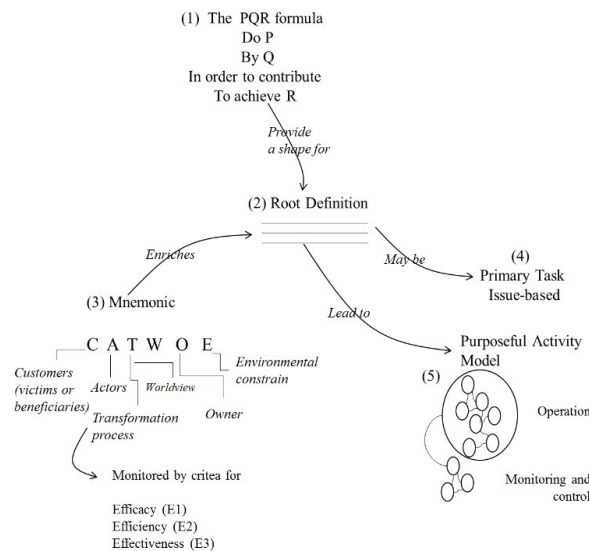


Fig. 1. Conceptual model process (Checkland et al., 2006)

The AHP methodology, developed by Saaty (1993) and further elaborated by Marimin (2017), is applied as a multi-criteria decision-making method that takes a total, holistic approach to complex problem situations. Following Saaty's (1993) framework, the process involves decomposing problems into hierarchical elements and performing pairwise comparisons, with consistency validated through Consistency Ratio (CR) calculations that must be 10% or less.

The research process integrates problem mapping through SSM, utilizing expert FGDs and stakeholder inputs, followed by AHP analysis to establish strategic priorities and solutions. The process of creating and processing AHP data in research can be illustrated as shown in Fig. 2. The methodology implementation involves examining:

- Environmental and problematic situations faced by BPKH
- Strategic assumptions and key factors through SSM analysis
- Hierarchical analysis of objectives, actors, factors, and strategies through AHP
- Integration of findings for developing optimal management solutions

Data analysis employs the Expert Choice application for AHP processing, with hierarchy development based on expert opinions through experience and literature, confirmed through in-depth interviews and discussions with field experts (Saaty, 1993; Marimin, 2017; Checkland & Poulter, 2006).

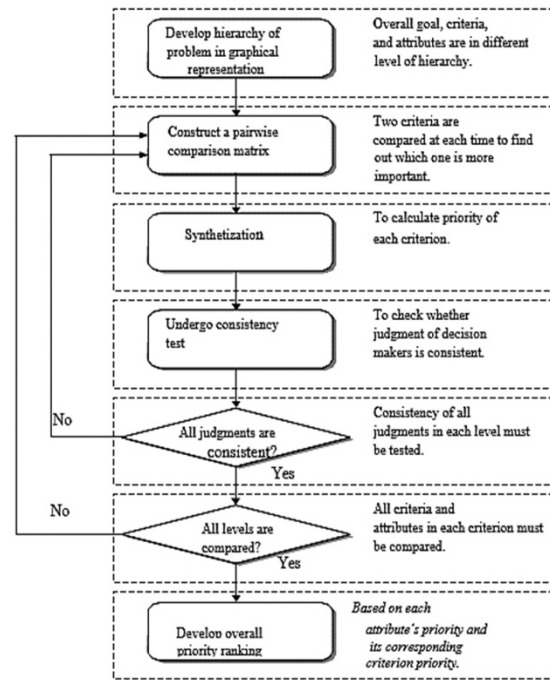


Fig. 2. Analytical Hierarchy Process data processing scheme (Saaty 1993)

## 4. Results

This research emphasizes several key factors that will shape the future of Hajj financial management in Indonesia, based on the results of a comprehensive analysis using Soft Systems Methodology (SSM) and Analytical Hierarchy Process (AHP).

### 4.1 Analysis of Existing Conditions in Hajj Financial Management in Indonesia

At this stage, system analysis was conducted to design a model of existing conditions faced by BPKH, from problem identification and problematic situations to rich picture development. These situations were analyzed by stakeholders to examine the main players in Hajj financial management conducted by BPKH and the role and sentiment of each stakeholder.

#### 4.1.1 Stage One SSM: Problematic Situation Identification (Situation Considered Problematic)

The identification of problematic situations began with conducting FGDs with key persons directly involved in Hajj financial management, particularly officials/practitioners from BPKH, government institutional practitioners/observers and organizational governance experts, researchers, and policy makers. FGDs were conducted four times through online Zoom meetings, each lasting 2 hours. To further understand the existing conditions related to Hajj financial management, analysis was conducted on activity logs using secondary data. The interview results can be detailed as follows:

1. BPKH's Investment Responsibility and Regulatory Framework BPKH has responsibility for managing Hajj funds deposited by pilgrims by placing them in investment portfolios that can provide good returns. As supported by Witjaksono's (2019) research, Hajj finances invested in infrastructure financing projects can provide benefit values such as facilities for improving Hajj service quality. Similarly, Jumali (2018) emphasizes the importance of a holistic approach to Hajj fund investment. The management of involved partners requires orchestration between ministries and institutions, necessitating the formation of a body that can coordinate between partners involved in the Hajj ecosystem.
2. Hajj Financial Management Components Financial management encompasses receipts including initial deposits for regular and special Hajj, benefit values, operational efficiency funds, Permanent Endowment Fund (DAU), and other legitimate non-binding sources. Expenditures include Hajj implementation costs, BPKH operations, financial placement and investment, deposit refunds, and benefit value payments.
3. Investment Strategy and Limitations Referring to Law Number 34 of 2014 on Hajj Financial Management, the maximum limit for direct investment is 20% and indirect investment is 10% of total managed funds. Currently, BPKH's strategy involves investments in Indonesia and Saudi Arabia, though implementation is still in progress.

### 4.1.2 Stage Two SSM: Rich Picture of Hajj Financial Management

Following Checkland and Poulter's (2006) framework, the rich picture was developed by:

1. Identifying concepts and ideas under review
2. Using symbols or icons representing SSM practitioners' ideas
3. Using connecting lines between main concepts and ideas with brief explanations where needed

Based on situational analysis, after analysis 1-2-3, the rich picture of Hajj financial management is explained in Figure 3. The rich picture in its preparation considers investment factors, regulatory support, and current activity logs. The rich picture consists of elements in the form of various icons that cause the full condition of Hajj financial management. These sensitive elements will then be discussed again with experts to determine important factors in formulating strategies relevant to Hajj financial management by BPKH through AHP. Based on the problematic situation in Fig. 3, it can be explained that Hajj financial management is constrained by the transition of managing bodies, which was initially managed by the Ministry of Religious Affairs, but according to Law 34 of 2014 is now managed by BPKH. This has resulted in gaps related to subsidies in Hajj implementation. BPKH, as the institution given responsibility for managing Hajj finances, strives to develop these Hajj funds in various forms of investment. The Ministry of Religious Affairs, as the body regulating Hajj pilgrimage implementation, continuously strives to provide the best service to the community. To strengthen the Ministry's focus on providing services and guidance to Hajj pilgrims, restructuring in Hajj financial management was conducted. For Hajj fund management to be more effective and productive, the role of financial institutions is needed to optimize these investments, along with the role of BPK in supervising Hajj financial management.

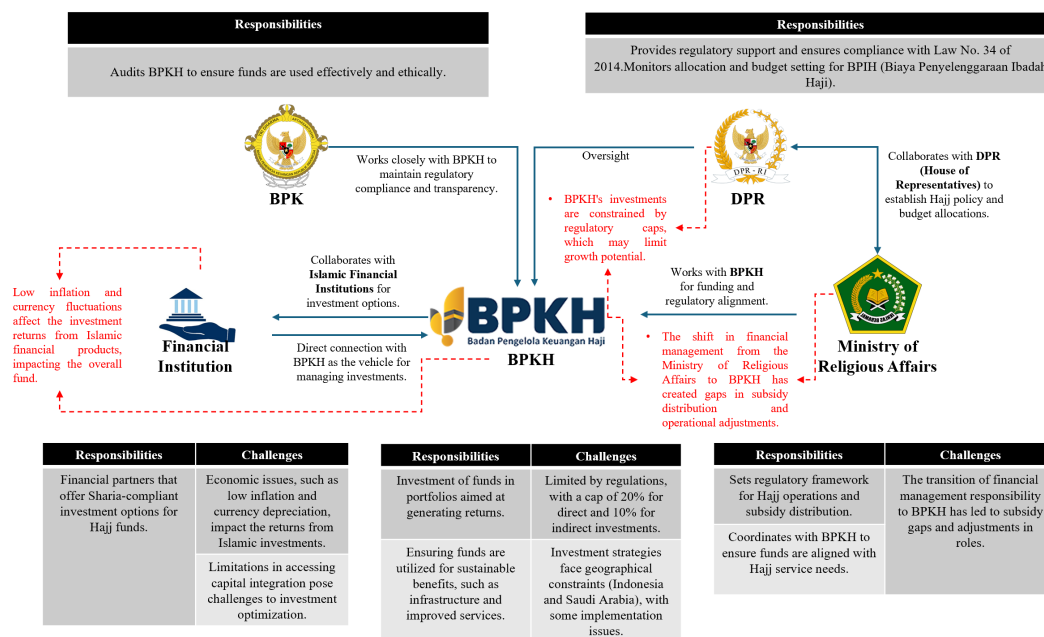


Fig. 3. Rich Picture of Hajj Financial Management System

In Hajj fund management, numerous countries have adopted methods implemented by Malaysia's Tabung Haji, which has successfully managed Hajj funds for over 50 years. Investment of Hajj funds in appropriate instruments generates high returns and creates protective mechanisms against potential losses by designing portfolios with low-correlated instruments. When risks are managed well, this strategy provides ample opportunities to achieve desired returns. Following similar principles, BPKH in Indonesia plans to invest Hajj funds in secure sectors to safeguard both nominal value and exchange rates, as these factors influence returns significantly. Consequently, the role of each institution is critical to ensuring the success of Hajj financial management.

Research on Tabung Haji and its performance has highlighted the importance of diversified investments. A study comparing Indonesia's BPKH and Malaysia's Tabung Haji found that while both organizations strive for optimal returns, BPKH's investment strategy showed slightly higher returns than Tabung Haji, underscoring the effectiveness of diversified portfolio management (Syanwani et al., 2021). Similarly, Witjaksono and Bustomi (2021) emphasized the role of strategic asset allocation in risk management, suggesting that Sharia-compliant assets, such as gold and sukuk, are effective in preserving value against market volatility. Masruroh et al. (2023) further demonstrate that adopting diversified Islamic financial instruments enables Hajj fund managers to achieve a balanced risk-return profile, ultimately benefiting fund sustainability.

### 4.1.3 Stage Three and Four SSM: Determining Root Definition (RD) and creating the Purposeful Activity Model (PAM)

According to Checkland and Scholes (1990), root definition is a clear statement about activities that occur or may occur within the variables being studied. This root definition is based on previously collected information about Hajj financial management by BPKH. Root definition compilation uses the PQR formula. The construction process of relevant human activities in SSM indicates the research has entered the system thinking stage. As explained by Checkland and Poulter (2006), system thinking consists of two stages. The first stage determines the root definition. Root definition is the relevant system regarding the problem system being studied. According to Checkland and Scholes (1990), root definition can also be described as a brief verbal definition expression of the nature of a purposeful activity system considered relevant to exploring the problem situation. Root definition must follow the PQR formula: "a system to do P by Q in order to achieve R" (Checkland and Scholes 1990) or "do P, by Q, in order to help achieve R" (Checkland & Poulter 2006).

Performance measurement criteria initially used 3E (efficacy, efficiency, and effectiveness) but developed into 5E's (efficacy, efficiency, effectiveness, elegance, and ethics). The second stage involves creating the conceptual model (Checkland and Poulter, 2006). At this stage, researchers construct models based on purposeful activity systems. According to Checkland (1990), the conceptual model depicts system activities with elements as verbs, based on root definition and verb structure referring to logic base. The PQR analysis formula obtained is: Analysis of problematic Hajj fund management in Indonesia (P), through regulatory and institutional transformation (Q), to create efficient orchestration and governance of Hajj financial management (R). In the PQR phase, SSM practitioners develop action plans that have the potential to transform the system in desired or more desirable directions. The root definition obtained is tested and refined using CATWOE analysis to truly represent a relevant human activity system. In the context of BPKH's Hajj financial management research based on the current rich picture of problems, the real world is translated into a relevant system. CATWOE represents:

- Customers (C): Direct beneficiaries or victims of the transformation process
- Actors (A): Those performing transformation activities
- Transformation (T): Process of converting inputs to outputs
- Worldview (W): Perspective making the transformation meaningful
- Owners (O): Those with authority over the system
- Environmental constraints (E): Constraints affecting transformation

Based on the company's situational analysis, researcher understanding, and CATWOE results, the outcomes are presented in Table 1.

**Table 1**  
CATWOE Analysis Results for Hajj Financial Management System

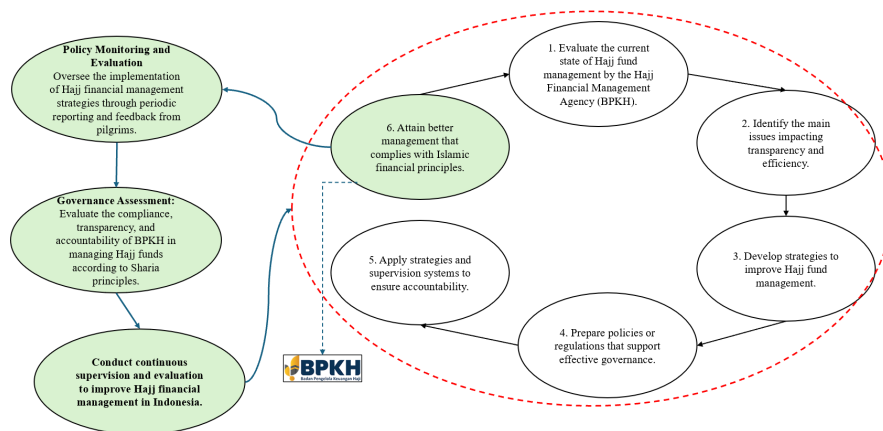
Symbol	Description
<b>C – Customers</b>	Parties who benefit from or "may be" impacted by BPKH's Hajj financial management
<b>A – Actors</b>	BPKH, House of Representatives/Government, BPK, PIHK/PPIU, Associations, Umrah and Hajj Pilgrims, and Other Business Partners
<b>T – Transformation Process</b>	Analysis of Hajj financial issues -> Transformation of regulations and investments in Hajj financial management → Creating efficient orchestration and governance of Hajj finances
<b>W – Worldview</b>	Realizing transparent and efficient Hajj financial management
<b>O – Owners</b>	Parties who can or have the power to stop or modify process T
<b>E – Environmental Constraints</b>	Constraints outside the system's scope, which in this case are non-binding regulations, numerous Hajj fund investment models without transparency

The primary customers targeted and focused on Hajj financial management are: BPKH, BPK, and Hajj pilgrims. The main actors in the Hajj financial management Development Model are BPKH, Parliament/Government, PIHK, Associations, Hajj Pilgrims, and Other Business Partners. The transformation includes:

- a. Hajj financial placement and investment conducted according to sharia principles, considering security aspects, prudence, benefit value, and liquidity.
- b. BPKH proposes implementing a tax exemption strategy, as investments are still subject to a 15% tax burden. This value is considered to have a significant impact on the benefit value received by BPKH, as BPKH is a non-profit institution and the money management will ultimately return to pilgrims rather than employees or management.

The core of system thinking in SSM, as noted by Checkland and Poulter (2006), is creating conceptual models as intellectual tools used to discuss real-world situations considered problematic. The model in SSM represents systems of human activity or

purposeful activity. The conceptual model simplifies the highly complex system in the rich picture into a sequence of purposeful activity systems. The worldview aims to realize efficient and transparent Hajj and Umrah financial management.



**Fig. 4. Conceptual Model**

The conceptual model is created based on Checkland and Poulter (2006), in the following sequence:

- a. Previously determined root definition with PQR analysis and CATWOE analysis plus monitoring and control activities.
- b. Beginning with T and W purposeful actions as transformation. The structure of interdependent activities as a model with purposeful activities in the real-world thinking system includes:
  - Governance process in Hajj financial management
  - Adjustment to various investment types in Hajj financial management
  - Importance of financing supporting existing governance optimization
  - Infrastructure and facility improvement
  - Formation of supervisory institutions directly coordinating with BPKH

The conceptual model (Fig. 4) as a new system entity arranged with purposeful activities in real-world thinking that can adapt to external/environmental changes is expected to provide direction and strategy for BPKH's Hajj financial management going forward to produce better performance.

**Table 2**  
Performance Measurement Criteria for System Activity Operation

5 E's	Description
Efficacy	Able to design efficient and transparent Hajj financial management compared to previous organizers
Efficiency	Realizing economical and optimal Hajj implementation
Effectiveness	Realization of efficiency and transparency in Hajj financial management
Elegance	Comprehensive transformation process provides positive impact for all stakeholders involved in Hajj financial management
Ethicality	Research results can be used as reference and recognized by decision-makers

**4.1.4 Stage Five SSM: Comparison of Conceptual Model Activities with Real-World Conditions**

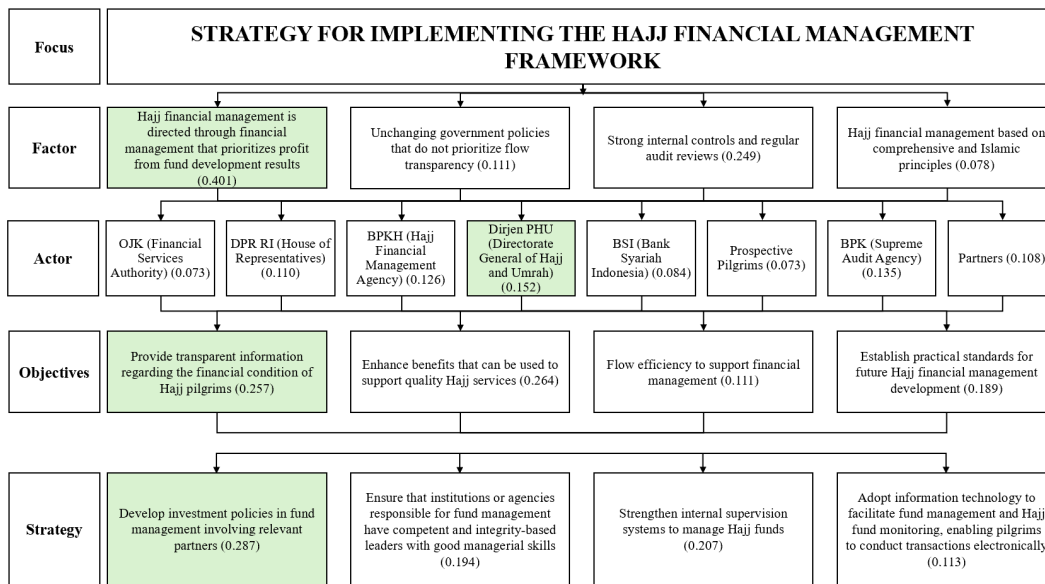
The comparison between conceptual model activities and real-world conditions produces implementation or activity gaps and requires activity changes, as shown in Table 3. The research findings indicate that the main customers targeted in Hajj and Umrah financial management are BPKH, BPK, and Hajj pilgrims. The primary actors in the Hajj and Umrah financial management Development Model are BPKH, Parliament/Government, PIHK/PPIU, Associations, Umrah and Hajj Pilgrims, and Other Business Partners. The core of system thinking in SSM involves creating conceptual models as intellectual tools to discuss real-world situations for developing an efficient model design. The key factors requiring attention include governance, regulation, and institutional frameworks.

**Table 3**  
Comparison of Conceptual Model Activities with Real-World Conditions

No	Key Factor Aspect	Conceptual Model	Real-World Condition	Possible Improvements
1	Governance	Suboptimal governance with disconnected components	Management divided between regulators, executors, and financial institutions	Governance improvement through establishment of an orchestrating institution to integrate sub-systems into an ecosystem
2	Regulation	Rigid and suboptimal regulations	Existing regulations still limit institutional collaboration	Amendment of institutional policies and preparation of institutions capable of orchestrating Hajj financial management
3	Institutional Framework	Institutions formed by regulation	Institutional silos still exist in Indonesian institutions	Transparency in coordination; organizing institutions, financial managers, and Hajj-related partners must continuously collaborate in determining optimal Hajj implementation forms in terms of both cost and organization

*Strategy for Improving Hajj Financial Management*

The AHP analysis was tested based on data and facts compiled in the field, strengthened through depth interviews, resulting in matrix weighting that can be applied in Strategy Selection Formulation relevant to BPKH's Hajj financial management. The weighting factors in this research were grouped into four clusters, with each cluster consisting of several nodes or variables. The grouping into cluster types was conducted by considering system classification in input-output (Marimin, 2007). Priority strategy determination analysis using the Analytical Hierarchy Process (AHP) method was conducted to determine the best Strategy alternatives based on analysis of influential factors or objectives according to interest perspectives. This AHP analysis also yielded results on the priority of most influential factors, contributing actors, priority strategy objectives to be implemented, and the most appropriate strategies to be applied in Hajj financial management. Based on the AHP framework, AHP questionnaires were prepared as attached. The AHP questionnaires were distributed to seven experts who interact directly with Hajj financial management in Indonesia. The questionnaire results from each expert's justification were input and processed using Expert Choice software as shown in Fig. 5.



**Fig. 5.** AHP Hierarchy based on Expert Justification Results

Based on the synthesis of expert justification results using the AHP method, it is evident that alternative strategies for implementing Hajj financial management design in the future are ranked into five levels (five strata). The strategic alternative considered the top priority is developing investment policies in managing involved partners (0.287). This investment agenda is conducted by BPKH to place funds deposited by prospective Hajj pilgrims to obtain good returns, even though current government regulations may not fully support this objective. Consequently, enhancing these investment policies is essential to create a more transparent funding flow structure managed by partners.



Research from Witjaksono and Bustomi (2021) shows that Hajj funds invested in infrastructure can generate added value, such as enhancing facilities for improving Hajj service quality. Additionally, Jumali (2018) emphasizes the importance of a comprehensive approach to Hajj fund investment, advocating for strategic partnerships and orchestration between various ministries and institutions to optimize fund management. Managing involved partners would benefit from the establishment of a coordinating body, such as a Hajj Committee. This entity could operate akin to a Coordinating Ministry under the President, effectively aligning the objectives of BPKH, the Ministry of Religious Affairs, the Ministry of Health, the Ministry of Transportation, the Ministry of Foreign Affairs, and State-Owned Enterprises. Such a body would enable efficient policy orchestration to maximize investment potential and enhance Hajj service quality.

The second strategic alternative is strengthening internal control and supervision systems to prevent misuse of Hajj funds (0.207). The goal of enhanced supervision is to shift accountability from a purely hierarchical, upward-focused model to one that prioritizes public and community accountability. Currently, the Supervisory Board operates as an extension of Commission VIII of Parliament in overseeing the Annual Work Plan and Budget (RKAT), though decisions in Commission VIII are broadly defined (Unit 1). Consequently, the responsibility for detailed oversight is delegated to BPKH's Supervisory Board at the granular level (Unit 3). This new supervision model aims to create transparency and accountability in the implementation of Hajj financial management, effectively reducing corruption risks. Research supports this approach, emphasizing the importance of transparent internal controls and accountability frameworks to prevent fund misuse. A study by Wardayati and Imaroh (2015) highlights that internal control policies are essential in public institutions, as they ensure compliance, reduce inefficiencies, and prevent potential fraud, thereby fostering public trust. Similarly, Budiarto and Zulaika (2022) found that implementing internal controls significantly impacts accountability and fraud prevention, stressing that transparency in fund management is key to minimizing risks. Rashid (2022) shows that an effective internal control system can detect and prevent fraud, particularly when organizations establish a culture of transparency and ethical behavior across all levels. Additionally, Matiyabu et al. (2017) suggest integrating digital solutions in supervision mechanisms to enhance transparency and accountability, which is especially useful in public fund management contexts where risks of corruption are high.

The third strategic alternative is to ensure that institutions or bodies responsible for Hajj fund management are led by competent and integrous individuals with advanced financial management capabilities (0.194). This necessitates incorporating competency requirements, such as professional certification in fund and investment management, into the selection criteria for BPKH members, reflecting best practices seen globally. From an Islamic perspective, leadership is paramount to achieving organizational goals, as leaders are entrusted with guiding all layers of the organization. Effective leadership in Islam extends beyond merely executing existing programs; it involves embodying exemplary behavior and professionalism, fostering accountability, and facilitating regular spiritual and mental development at all organizational levels.

This emphasis on leadership is well-supported by Islamic financial principles, which underscore the role of ethical and competent leadership in maintaining financial integrity and stakeholder trust. Ratten et al. (2017) highlight that Islamic finance integrates entrepreneurial and ethical management practices, suggesting that Islamic leaders are expected to handle finances with accountability and transparency to uphold the principles of Shariah. Furthermore, Gazi (2020) elaborates on the foundational role of Islamic leadership in achieving organizational goals, positing that Islamic leaders must serve as role models, demonstrating integrity and spiritual dedication to their responsibilities. Additionally, research by Jumady (2020) supports the need for leaders with holistic quality management skills, highlighting that leadership in Islamic finance should integrate ethical values to reinforce public accountability and enhance financial performance. This approach aligns with Islamic ethical standards, reinforcing that leaders are expected to operate transparently, making integrity and professional competency central to the effective management of Hajj funds.

The final strategic alternative is adopting information technology to facilitate Hajj fund collection and monitoring, enabling pilgrims to conduct electronic transactions (0.113). This initiative could be implemented by digitalizing registration, Hajj quota acquisition, and payment processes connected with receiving banks and the Ministry of Religious Affairs. Studies in recent years emphasize the importance of digital technologies in fund management and financial transparency. Nurhayati et al. (2021) illustrate how digital technology significantly optimizes fund collection processes, with applications to zakat collections providing insights for Hajj fund management. Furthermore, research by Hakizimana and Santoro (2023) shows that the adoption of advanced IT solutions, such as electronic billing, enhances transparency and compliance in fund management, which aligns with the goals of Hajj fund management.

Additionally, Anupama et al. (2023) highlight blockchain technology's potential for ensuring transparency and accountability in financial transactions, which is particularly relevant for managing Hajj funds where multiple stakeholders are involved. The case study of Malaysia's zakat institutions by Salleh and Chowdhury (2020) shows that technology adoption can streamline processes and enhance public trust in fund management.

The AHP analysis calculations revealed significant insights into actor roles and priorities in Hajj financial management. In business management factors prioritizing fund development, BPKH emerged as the leading actor with the highest weight value (0.164), followed by Partners (0.147), and PHU Director General (0.104). From a government policy perspective, the PHU Director General holds the highest weight (0.193), with BPKH following at 0.158. When examining strong internal control factors, BPK leads with 0.1713, followed by Parliament at 0.1492, while for Islamic principles-based management, BPK maintains the highest weight at 0.1767.

Studies support the prioritization of actors based on AHP analysis in Hajj fund management, emphasizing the importance of transparent and efficient fund allocation in accordance with Islamic principles. Masruroh et al. (2023) underscore the need for optimized strategic asset allocation within Islamic finance, highlighting the pivotal role of BPKH and other key actors in managing Hajj funds efficiently. Additionally, Alfiyanti et al. (2019) argue that effective Hajj fund management aligns with *maqāsid al-sharī'ah* principles, which ensure the ethical use of funds and stress the significance of BPK and related authorities in safeguarding transparency.

The analysis of objectives from different actors' perspectives revealed varied priorities. OJK prioritizes information transparency (0.298), followed by practical standards development (0.273) and benefit value increase (0.225). Parliament strongly emphasizes information transparency (0.476), with benefit value increase as their secondary priority (0.186). BPKH focuses primarily on developing practical standards for Hajj financial management (0.307), while the PHU Director General similarly prioritizes practical standards (0.298). BPS BPIH and prospective pilgrims both emphasize benefit value increase as their primary objective, with weights of 0.357 and 0.496 respectively. BPK prioritizes information transparency (0.334), as do the Partners (0.315).

Strategic analysis relative to objectives revealed that for achieving information transparency, strengthening supervision and control systems ranks highest (0.346), followed by ensuring competent leadership (0.254). For improving benefit values, adopting information technology leads (0.203), while for achieving efficient Hajj fund flow, developing investment policies emerges as the primary strategy (0.444). Similarly, for realizing practical standards in Hajj management development, investment policy development remains the top priority (0.409), followed by ensuring competent institutional leadership (0.156). These comprehensive results reflect the complex interplay of actors, objectives, and strategies in Hajj financial management, providing a quantitative basis for decision-making and policy development.

## 5. Discussion

This study applied Soft Systems Methodology (SSM) and Analytical Hierarchy Process (AHP) to systematically analyze the current challenges and strategic alternatives for improving the management of Hajj funds in Indonesia. The SSM analysis revealed gaps in the existing governance structure, regulatory framework, and institutional collaboration following the transfer of fund management responsibilities from the Ministry of Religious Affairs to the Hajj Financial Management Agency (BPKH). Key issues identified include the need for more transparent and integrated coordination between regulatory bodies, financial institutions, and other stakeholders in the Hajj ecosystem.

Building on these insights, the AHP analysis prioritized four main strategic alternatives: 1) developing investment policies to better manage partnerships, 2) strengthening internal control and supervision systems, 3) ensuring the competency and integrity of Hajj fund management leadership, and 4) adopting information technology to facilitate fund collection and monitoring. These findings align with and extend prior research emphasizing the importance of prudent and diversified investment strategies (Jumali, 2018; Witjaksono & Bustomi, 2021), strong governance and oversight mechanisms (Wardayati & Imaroh, 2015; Budiarto & Zulaika, 2022), and the integration of Islamic principles in Hajj fund management (Ratten et al., 2017; Alfiyanti et al., 2019).

The study's results have significant practical implications for policymakers and Hajj fund management institutions. Implementing the identified strategic alternatives could enhance the transparency, efficiency, and overall governance of Hajj funds in Indonesia. For instance, establishing a coordinating body to orchestrate investment policies and partnerships could optimize returns while ensuring alignment with Islamic finance principles. Strengthening internal controls and public accountability measures can help prevent misuse of funds and build trust with stakeholders. Prioritizing leadership competency, both in terms of financial expertise and ethical integrity, is crucial for the effective stewardship of Hajj funds. Additionally, leveraging digital technologies can streamline processes, improve transparency, and empower pilgrims with greater agency in managing their Hajj journeys.

While this study makes valuable contributions to the understanding and strategic planning of Hajj fund management in Indonesia, it is important to acknowledge its limitations. The findings are based on a specific context and timeframe, and may not be fully generalizable to other settings. Future research could explore the implementation challenges and outcomes associated with the proposed strategic alternatives, as well as investigate the applicability of the SSM and AHP methodologies in other Islamic finance domains.

In conclusion, this study provides a comprehensive and systematic analysis of the complex challenges surrounding Hajj fund management in Indonesia. By integrating SSM and AHP approaches, it offers actionable strategic recommendations grounded in both systems thinking and quantitative prioritization. Implementing these strategies could significantly enhance the transparency, efficiency, and governance of Hajj funds, ultimately benefiting pilgrims and upholding the principles of Islamic finance. The insights generated from this research can inform policy discussions and guide the continuous improvement of Hajj fund management practices in Indonesia and beyond.

## 6. Conclusion

This study has comprehensively explored the complex landscape of Hajj financial management in Indonesia, employing a combination of Soft Systems Methodology (SSM) and Analytical Hierarchy Process (AHP) to identify key challenges and develop strategic solutions. The research reveals that the current system is constrained by regulatory limitations, institutional silos, and suboptimal governance structures that hinder the effective utilization of Hajj funds. Through a rigorous process of problem structuring, conceptual modeling, and expert input, the study has identified critical areas for improvement. These include developing comprehensive investment policies, strengthening internal controls and supervision, ensuring competent and integrous leadership, adopting enabling technologies, and aligning stakeholder incentives with a focus on transparency.

The AHP analysis provides valuable insights into the relative priorities and perspectives of key actors in the Hajj ecosystem. It highlights the central role of BPKH in driving business management and fund development, while also underscoring the importance of religious authorities in setting policy direction. The analysis also reveals a strong consensus among stakeholders on the primacy of information transparency as a key objective. Ultimately, this study lays the groundwork for a more efficient, transparent, and pilgrim-centric approach to Hajj financial management in Indonesia. By offering a systematic framework for reform, grounded in a deep understanding of the problem situation and stakeholder dynamics, it contributes meaningfully to the ongoing effort to ensure the sustainability and integrity of this sacred Islamic obligation.

## 7. Recommendation

The results of this study offer several important recommendations for stakeholders in the Hajj financial management ecosystem in Indonesia. BPKH, as the primary institution responsible for managing Hajj funds, should prioritize the development of comprehensive investment policies that optimize returns while ensuring transparency and compliance with Islamic principles. This should be accompanied by the establishment of clear guidelines for partner management and mechanisms for monitoring and evaluating investment performance.

Policymakers and regulatory bodies should focus on creating an enabling environment for effective Hajj financial management. This may involve amending existing regulations to facilitate greater inter-agency coordination and establishing a high-level coordinating body to oversee and orchestrate the efforts of various stakeholders in the Hajj ecosystem. Such measures could significantly enhance the efficiency and effectiveness of Hajj service delivery. Internal control and supervision mechanisms within BPKH and other Hajj management institutions must be strengthened to prevent misuse of funds and ensure the effectiveness of management practices. This could involve creating an independent supervisory entity, conducting regular audits and performance evaluations, and introducing more stringent selection criteria for leadership positions that emphasize competence and integrity. All stakeholders in the Hajj ecosystem, including BPKH, religious authorities, regulatory bodies, and audit agencies, should work towards aligning their priorities and incentives, with a central focus on pilgrim welfare and transparency. Fostering a culture of collaboration, mutual accountability, and continuous improvement can help Indonesia set a global standard for excellence in Hajj financial management.

Researchers and academic institutions have a crucial role to play in advancing the understanding of Hajj financial management and informing policy decisions. Future research should focus on evaluating the effectiveness of different investment strategies, assessing the impact of regulatory reforms, and exploring innovative solutions to enhance the efficiency and transparency of Hajj fund management.

By implementing these recommendations, Indonesia can transform its Hajj financial management system into a more resilient, transparent, and pilgrim-centric model. This requires continuous collaboration among stakeholders, a willingness to adapt to changing circumstances, and a steadfast commitment to upholding the sacred trust of managing Hajj funds in the best interests of Indonesian pilgrims.

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