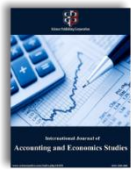
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Research paper



Developing BSI Agent Networks to Strengthen Islamic Banking Financial Inclusion: Insights from an Analytic Network Process Study

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Abstract

This study examines strategies for developing Islamic banking financial inclusion services through Bank Syariah Indo-nesia (BSI) Agents as extended outlets for reaching underserved communities. Despite Indonesia's large Muslim popula-tion, the outreach and service quality of Islamic banking remain limited compared to conventional banks, driven by human resource constraints, unattractive incentive structures, limited product and service features, aggressive competi-tion from conventional bank agents, and inadequate infrastructure in remote areas. To address these challenges, this study employs the Analytic Network Process (ANP) using a qualitative approach based on expert judg-ment. Primary data were collected through in-depth interviews with five expert informants comprising academics, BSI practitioners, and regulators. Data collection involved observation, interviews, questionnaires, documentation, and literature review, and the analysis was conducted using the Super Decisions software. Kendall's Coefficient of Concordance (W) was ap-plied to assess the level of agreement among experts. The results indicate that the most critical constraints are low em-ployee awareness, limited agent competence, unattractive incentive structures, and infrastructure limitations in remote areas. Priority solutions include increasing dedicated human resources for agent management, integrating agent perfor-mance into key performance indicators (KPIs), expanding product and service features, and strengthening below-the-line promotion. At the strategic level, the findings highlight the importance of strengthening human resources, developing robust and user-friendly digital agent platforms, and implementing cluster-based agent management. The Kendall's W values indicate a moderate level of expert agreement, supporting the robustness of the ANP results. This study contrib-utes to the literature on Islamic banking and financial inclusion by providing empirical, strategy-oriented insights into the development of agent-based Islamic banking services. The findings offer practical implications for banks, regulators, and policymakers seeking to strengthen inclusive, sus-tainable, and competitive Islamic banking ecosystems.

Keywords: *Bank Syariah Indonesia Agents; Islamic Banking; Financial Inclusion; Analytic Network Process; Agent Banking.*

1. Introduction

Financial inclusion has become a central pillar of sustainable economic development, particularly in emerging economies where significant segments of the population remain underserved by formal financial institutions. The World Bank defines financial inclusion as access to useful and affordable financial products and services—such as transactions, payments, savings, credit, and insurance—delivered in a re-sponsible and sustainable manner (World Bank, 2022). Despite substantial global progress over the past decade, financial exclusion persists, especially among low-income households, rural communities, micro-entrepreneurs, and informal sector workers. These challenges are even more pronounced in countries with large geographic dispersion and socio-economic disparities, such as Indonesia.

In the Indonesian context, financial inclusion has been strongly promoted as part of the national development agenda. The government has introduced various policies and initiatives, including the National Strategy for Financial Inclusion (Strategi Nasional Keuangan Inklusif/SNKI), aimed at expanding access to financial services across regions and population groups. While Indonesia has achieved nota-ble improvements in financial inclusion indicators, disparities remain between urban and rural areas, as well as between conventional and Islamic financial services (Otoritas Jasa Keuangan [OJK], 2023). This gap is particularly relevant given Indonesia's status as the country with the largest Muslim population in the world, where demand for Sharia-compliant financial services continues to grow.

Islamic banking plays a strategic role in promoting inclusive finance by offering financial products that adhere to Sharia principles, em-phasizing risk-sharing, asset-backed financing, and ethical considerations. These characteristics make Islamic banking particularly suitable for serving marginalized and low-income communities that may be excluded from conventional banking due to collateral requirements, interest-based contracts, or religious considerations (Beck, Demirgüç-Kunt, & Merrouche, 2013). However, despite its potential, the

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outreach of Islamic banking in Indonesia remains relatively limited compared to conventional banks, both in terms of market share and geographical coverage.

One of the key structural challenges faced by Islamic banking institutions in expanding financial inclusion is limited physical infrastructure, especially in remote and rural areas. Establishing branch offices involves substantial operational costs and regulatory requirements, which may not be economically viable in low-density or low-income regions. To address this challenge, branchless banking and agent-based service models have emerged as effective mechanisms to extend financial services beyond traditional bank branches. Bank agents—individuals or business entities authorized to provide basic banking services on behalf of banks—have been widely adopted in many developing countries as a cost-efficient and scalable solution for enhancing financial inclusion (Lyman, Ivatury, & Staschen, 2006).

In Indonesia, the agent banking model has been institutionalized through regulatory frameworks that allow banks to collaborate with local agents to deliver basic financial services, such as account opening, deposits, withdrawals, bill payments, and micro-financing. Bank Syariah Indonesia (BSI), as the largest Islamic bank in the country following the merger of three state-owned Islamic banks, has strategically adopted the agent-based model to expand its outreach. BSI agents serve as an important interface between the bank and communities that have limited access to formal banking infrastructure, particularly in rural and semi-urban areas.

The role of BSI agents extends beyond mere transactional functions. In many communities, agents act as financial intermediaries, educators, and trust-builders, facilitating greater understanding and acceptance of Islamic financial products. Trust is a critical factor in financial inclusion, especially among populations with limited financial literacy or prior negative experiences with formal financial institutions (Allen et al., 2016). Through close social ties and local presence, BSI agents are uniquely positioned to reduce information asymmetry, enhance financial literacy, and encourage the adoption of Sharia-compliant financial services.

Nevertheless, the effectiveness of agent-based Islamic banking services in promoting financial inclusion is not without challenges. Issues such as limited agent capacity, inadequate digital infrastructure, regulatory constraints, low financial literacy among customers, and operational risks may hinder the optimal performance of agents. Moreover, the rapid digital transformation of the banking sector requires agents to adapt to new technologies and service delivery models, which may not always align with local capabilities and resources (Demirgüç-Kunt et al., 2018). These challenges underscore the need for a well-formulated development strategy that integrates institutional support, technological innovation, human resource development, and regulatory alignment.

Existing literature on financial inclusion has extensively examined the role of agent banking and digital finance in expanding access to financial services. However, empirical studies focusing specifically on Islamic banking agents and their strategic role in enhancing financial inclusion remain relatively limited, particularly in the Indonesian context. Most studies tend to focus on conventional banking agents or analyze Islamic banking development at a macro level without sufficiently addressing the operational and strategic dimensions of agent-based service delivery (Mohieldin et al., 2012). This gap highlights the importance of conducting in-depth research on how Islamic banking agents, such as those of BSI, can be strategically developed to maximize their contribution to inclusive finance.

Therefore, this study aims to analyze strategies for developing Islamic banking financial inclusion services through Bank Syariah Indonesia agents. By examining institutional frameworks, operational practices, technological adoption, and agent capacity-building, this study seeks to provide a comprehensive understanding of how agent-based Islamic banking services can be optimized to reach underserved populations. The findings are expected to contribute to the academic literature on Islamic finance and financial inclusion, as well as offer practical insights for policymakers, regulators, and Islamic banking practitioners in Indonesia and other emerging economies with similar socio-economic characteristics.

2. Theoretical Framework

2.1. Financial inclusion and its role in economic development

Financial inclusion has been widely recognized as a key driver of economic growth, poverty reduction, and social equity. By enabling access to formal financial services, individuals and businesses can better manage risks, invest in productive activities, and improve overall welfare (Demirgüç-Kunt et al., 2018). Empirical evidence consistently demonstrates that higher levels of financial inclusion are associated with improved income distribution, increased savings, and enhanced resilience among vulnerable populations (Allen et al., 2016). Consequently, financial inclusion has become a central policy objective, particularly in developing and emerging economies.

Despite notable global progress, financial exclusion remains prevalent among rural communities, micro and small enterprises, women, and informal sector workers. Persistent barriers—including high transaction costs, limited documentation, low financial literacy, and geographic distance—continue to restrict access to formal financial services (World Bank, 2022). These conditions underscore the need for alternative delivery channels capable of efficiently reaching underserved populations.

Within this context, prior studies collectively suggest that financial inclusion outcomes are shaped by the interaction of human, institutional, technological, and environmental factors, which form the conceptual basis for structuring the problem clusters in the ANP model.

2.2. Islamic banking and financial inclusion

Islamic banking is increasingly viewed as a complementary mechanism for advancing financial inclusion, particularly in Muslim-majority countries. Rooted in Sharia principles of fairness, transparency, risk-sharing, and asset-backed transactions, Islamic finance aligns closely with the objectives of inclusive and ethical finance (Beck et al., 2013). The prohibition of interest (riba) and excessive uncertainty (gharar) makes Islamic financial products more acceptable to populations that may refrain from conventional banking for religious reasons.

Existing studies highlight the potential of Islamic banking to serve unbanked and underbanked communities, especially micro-entrepreneurs and low-income households (Mohieldin et al., 2012). Profit-and-loss sharing schemes such as mudarabah and musharakah offer alternative financing options for individuals with limited collateral but viable business activities. However, empirical findings also suggest that the contribution of Islamic banking to financial inclusion remains below its potential due to institutional constraints, limited outreach, and operational inefficiencies (Asutay, 2015).

In Indonesia, Islamic banking has experienced steady growth, yet its market share remains modest relative to conventional banking. This disparity has intensified calls for more innovative and inclusive service delivery strategies (OJK, 2023).

These mixed findings inform the ANP problem structure by positioning institutional capacity, outreach mechanisms, and operational effectiveness as interrelated constraints that must be addressed simultaneously rather than in isolation.

2.3. Agent banking as a financial inclusion strategy

Agent banking, or branchless banking, has emerged as a key strategy for extending financial services beyond traditional bank branches. By partnering with local individuals or businesses, banks can provide basic financial services while reducing operational costs and expanding geographic outreach, particularly in rural and remote areas (Lyman et al., 2006).
The literature identifies several mechanisms through which agent banking promotes financial inclusion. Agents leverage local trust and social networks to reduce informational and psychological barriers, facilitate rapid service scaling without heavy infrastructure investment, and often assist customers in understanding financial products and digital transactions (Allen et al., 2016; Demirgüç-Kunt et al., 2018).
Nevertheless, studies also document challenges such as limited agent capacity, liquidity constraints, weak supervision, and technological limitations. Without adequate institutional support and training, these weaknesses may undermine service quality and customer trust (Mas & Radcliffe, 2011).
These findings directly inform the ANP framework by distinguishing between human resource, technical, competitive, and community-related dimensions within the problem and solution clusters.

2.4. Islamic banking agents and sharia-compliant service delivery

The application of agent banking within Islamic banking introduces both opportunities and specific challenges. Islamic banking agents are required to balance operational efficiency with strict adherence to Sharia principles, necessitating adequate knowledge of Islamic contracts, ethical standards, and banking procedures (Dusuki & Abdullah, 2007).
Research suggests that Islamic banking agents can play a pivotal role in increasing awareness and acceptance of Sharia-compliant financial products, particularly among communities with limited financial literacy (Mohieldin et al., 2012). By acting as intermediaries who translate complex financial concepts into locally understandable terms, agents enhance customer confidence and participation.
However, the literature also cautions that insufficient training and weak integration between agents and Islamic banks may dilute the distinct value proposition of Islamic finance, especially when agents focus primarily on transactional services without conveying underlying Sharia principles (Asutay, 2015).
This dual operational–ethical responsibility differentiates Islamic banking agents from conventional agents and is explicitly incorporated into the ANP structure through human resource competence and governance-related criteria.

2.5. Bank syariah Indonesia agents and strategic development

As the largest Islamic bank in Indonesia, Bank Syariah Indonesia (BSI) has strategically adopted the agent-based model to support financial inclusion. BSI agents function as frontline service providers in areas with limited access to formal banking infrastructure, aligning closely with national financial inclusion policies and regulatory frameworks.
Despite their strategic importance, empirical studies focusing specifically on BSI agents remain scarce, with most existing research emphasizing conventional banking agents or macro-level Islamic banking development. This reveals a clear research gap regarding how institutional support, technology adoption, agent competency development, and regulatory alignment interact to enhance the effectiveness of Islamic banking agents.
Addressing this gap is crucial for understanding how BSI agents can be optimally developed as inclusive financial intermediaries. Building on existing literature, this study emphasizes the need for an integrated development strategy encompassing capacity building, digital infrastructure, incentive mechanisms, and governance frameworks, thereby contributing to stronger Islamic banking–based financial inclusion in Indonesia.
Unlike much of the conventional agent banking literature that focuses primarily on efficiency and outreach, this study contributes by integrating Sharia compliance, human resource readiness, incentive alignment, and digital platforms into a single ANP-based strategic framework tailored to Islamic banking agents.

3. Research Method

3.1. Research design and approach

This study adopts a qualitative research design with a decision-making framework to examine strategies for developing Islamic banking financial inclusion services through Bank Syariah Indonesia (BSI) Agents. Given the multidimensional and interdependent nature of the problems, solutions, and strategic alternatives associated with agent-based Islamic banking services, this study employs the Analytic Network Process (ANP). ANP is particularly suitable for addressing complex decision problems involving feedback, interdependence, and subjective judgments among criteria and alternatives (Saaty, 2005).
A qualitative approach is applied to capture in-depth insights from key stakeholders who possess expert knowledge and practical experience related to Islamic banking, financial inclusion, and agent-based service delivery. This approach enables a comprehensive understanding of institutional, operational, and contextual factors influencing the performance and development of BSI Agents.

3.2. Data collection and informants

Primary data were collected through in-depth interviews with five expert informants selected using purposive sampling. The informants consisted of academics specializing in Islamic finance and financial inclusion, practitioners from Bank Syariah Indonesia with direct involvement in agent management and operations, and regulators responsible for overseeing banking and financial inclusion policies. The selection of five expert informants ($n = 5$) is consistent with prior Analytic Network Process (ANP) studies, which emphasize the quality, expertise, and depth of knowledge of respondents rather than large sample sizes, as ANP relies on expert judgment for pairwise comparisons rather than statistical generalization (Saaty & Vargas, 2012; Ascarya, 2014). Expert judgment is a critical component of ANP, as the method relies on informed pairwise comparisons to determine priorities among decision elements (Saaty & Vargas, 2012).
To ensure data triangulation and robustness, multiple data collection techniques were employed, including direct observation, semi-structured interviews, structured questionnaires for pairwise comparisons, documentation review, and an extensive literature review. This triangulated approach enhances the credibility and validity of qualitative findings (Creswell & Poth, 2018).

3.3. Analytic network process (ANP) framework

The ANP model in this study was structured into several interconnected clusters representing key dimensions of the research problem, namely: (1) problem factors hindering Islamic banking financial inclusion through BSI Agents, (2) alternative solutions to address these problems, and (3) strategic priorities for agent development. Each cluster consists of elements derived from the literature review and preliminary expert consultations.
Pairwise comparisons were conducted to assess the relative importance of elements within and across clusters using Saaty's fundamental scale (Saaty, 2005). Consistency ratios were calculated to ensure the reliability of expert judgments, with values below the acceptable threshold of 0.10 indicating consistent comparisons (Saaty & Vargas, 2012).

3.4. Data analysis technique

The collected data were processed using the Super Decisions software, which is specifically designed to support ANP-based analysis. The software facilitates the construction of the network model, computation of local and global priority weights, and synthesis of results through supermatrix calculations. The final output of the ANP analysis provides prioritized problem factors, solution alternatives, and strategic recommendations for developing BSI Agents in enhancing Islamic banking financial inclusion.

3.5. Ethical considerations

Ethical considerations were carefully observed throughout the research process. Informants participated voluntarily and provided informed consent prior to data collection. Confidentiality and anonymity were maintained to ensure that individual responses could not be traced back to specific informants or institutions.

4. Result and Discussion

4.1. Results of ANP priority analysis

The Analytic Network Process (ANP) results reveal a structured prioritization of problems, solutions, and strategic alternatives related to the development of Islamic banking financial inclusion services through Bank Syariah Indonesia (BSI) Agents. The priorities were derived exclusively from expert pairwise comparisons and synthesized using Super Decisions software. Table 1 presents the global priority weights (G-Means) and rankings for each cluster and criterion.

Table 1: Priority Results of ANP Analysis

No	Node	G-Means	Rank
Cluster: Human Resource Problems			
1	Limited number of BSI staff as BSI Agent PIC	0.30852	4
2	Inadequate agent capacity and competence	0.37070	2
3	Limited BSI staff product knowledge regarding BSI Agent business	0.32078	3
4	Low employee awareness	0.46895	1
Cluster: Technical Problems			
1	Limited IT infrastructure	0.24745	3
2	Limited products and services	0.28361	2
3	Unattractive incentive structure	0.32905	1
4	Lack of coordination between BSI PIC and agents	0.20958	4
Cluster: Competitor Problems			
1	Larger and more widely distributed agents of other banks	0.24351	2
2	Low brand recognition of BSI Agents	0.21786	3
3	More aggressive promotion by other bank agents	0.33649	1
Cluster: Community Problems			
1	Infrastructure issues and limited electricity/internet in remote areas	0.26992	1
2	Low Islamic financial literacy	0.18242	3
3	Public security and trust issues	0.21116	2
Cluster: Human Resource Solutions			
1	Increasing human resources based on needs	0.41833	1
2	Agent performance as part of KPI	0.39974	2
3	Modular agent training model	0.34476	3
4	Internal knowledge-sharing sessions	0.23691	4
Cluster: Technical Solutions			
1	Strengthening IT infrastructure	0.25231	3
2	Expanding product and service features	0.34795	1
3	Competitive performance-based incentives	0.27917	2
4	Cluster-based agent management	0.24056	4
Cluster: Competitor Solutions			
1	Expanding agent acquisition in branch blank-spot areas	0.23166	3
2	Standardized BSI Agent design to enhance brand identity	0.24861	2
3	Strengthening below-the-line promotion	0.31243	1
Cluster: Community Solutions			
1	Use of devices with alternative connectivity	0.28336	1
2	Intensifying Islamic financial literacy programs	0.17749	3
3	Public advocacy and socialization	0.22672	2
Cluster: Strategies			
1	Increasing number of BSI Agent PICs, strengthening product knowledge, and setting activation KPIs	0.07827	1
2	Developing robust, user-friendly digital agent platforms with enhanced features	0.07381	2
3	Merit-based reward systems and agent competition	0.06241	5
4	Cluster-based agent management with field supervisors	0.07339	3
5	Targeted acquisition of new agents (MSMEs, cooperatives, Islamic sectors)	0.06658	4

Overall, the empirical results indicate that human resource–related constraints dominate the priority structure across problem, solution, and strategic clusters.

The results indicate that human resource issues constitute the most critical barrier to the effectiveness of BSI Agents, with low employee awareness emerging as the highest-priority problem. Empirically, this finding place human resource constraints above technical, competitive, and community-related issues. This aligns with prior studies emphasizing that internal awareness and institutional commitment are prerequisites for successful financial inclusion initiatives (Allen et al., 2016; Mohieldin et al., 2012).

From a technical cluster perspective, the unattractive incentive structure ranks as the most pressing issue. Table 1 shows that incentive misalignment receives a higher global priority weight than IT infrastructure limitations, indicating that governance and motivation mechanisms are perceived by experts as more urgent constraints than purely technological readiness. Incentives play a crucial role in sustaining agent motivation and service quality (Mas & Radcliffe, 2011).

Competition-related problems are dominated by aggressive promotion by conventional bank agents. This empirical ranking highlight branding and outreach as structural disadvantages faced by Islamic banking agents, reinforcing arguments that financial inclusion outcomes are shaped not only by service availability but also by visibility and trust (Demirgüç-Kunt et al., 2018). Community-related constraints, meanwhile, prioritize infrastructure limitations in remote areas, supporting the digital divide narrative documented by the World Bank (2022).

Immediately following Table 1, the prioritization of solutions shows a direct correspondence with the identified problems. Human resource expansion and KPI integration emerge as the top-ranked solutions, directly addressing the highest-priority constraint—low employee awareness. This one-to-one alignment strengthens the internal coherence of the ANP results. On the technical side, expanding product and service features outranks infrastructure strengthening, suggesting that agents require differentiated value propositions to remain relevant.

At the strategic level, the top-ranked strategy integrates human resource development, knowledge enhancement, and performance measurement. This strategic outcome represents the study's main empirical contribution: the identification of an integrated strategy that simultaneously links human capital, incentives, and digital enablement. Consistent with Saaty and Vargas (2012), the findings confirm that inclusion strategies are interdependent rather than sequential.

In practical terms, these results imply that HR-focused strategies should be prioritized first, followed by incentive realignment and digital product innovation, rather than treating infrastructure development as a standalone intervention. However, implementation may face challenges related to regulatory capacity, budget constraints, and the uneven readiness of agents across regions, which need to be addressed through phased and context-specific deployment.

4.2. Results of Kendall's coefficient of concordance (W)

To assess the degree of agreement among expert informants, this study employed Kendall's Coefficient of Concordance (W). Kendall's W measures inter-rater agreement for ranked data and ranges from 0 (no agreement) to 1 (perfect agreement) (Legendre, 2010; Siegel & Castellan, 1988). Table 2 reports the Kendall's W values for each problem, solution, and strategy cluster.

Table 2: Kendall's Coefficient of Concordance (W) Results

No	Node	G-Means	Rank	U	S	Max S	W
Human Resource Problems							
1	MSDM1	0.30852	4				
2	MSDM2	0.37070	2	0.36724	23.1947	178.638	0.12984
3	MSDM3	0.32078	3				
4	MSDM4	0.46895	1				
Technical Problems							
1	MTEK1	0.24745	3				
2	MTEK2	0.28361	2	0.26742	24.9376	185.318	0.13457
3	MTEK3	0.32905	1				
4	MTEK4	0.20958	4				
Competitor Problems							
1	MKOM1	0.24351	2				
2	MKOM2	0.21786	3	0.26595	11.0208	80.2543	0.13732
3	MKOM3	0.33649	1				
Community Problems							
1	MMSY1	0.26992	1				
2	MMSY2	0.18242	3	0.22117	11.4927	82.0045	0.14015
3	MMSY3	0.21116	2				
Human Resource Solutions							
1	SSDM1	0.41833	1				
2	SSDM2	0.34476	3	0.34994	23.4911	179.784	0.13066
3	SSDM3	0.23691	4				
4	SSDM4	0.39974	2				
Technical Solutions							
1	STEK1	0.25231	3				
2	STEK2	0.34795	1	0.28000	24.7136	184.467	0.13397
3	STEK3	0.27917	2				
4	STEK4	0.24056	4				
Competitor Solutions							
1	SKOM1	0.23166	3				
2	SKOM2	0.24861	2	0.26423	11.0387	80.3211	0.13743
3	SKOM3	0.31243	1				
Community Solutions							
1	SMSY1	0.28336	1				
2	SMSY2	0.17749	3	0.22919	11.4073	81.6892	0.13964
3	SMSY3	0.22672	2				
Strategies							
1	STR1	0.07827	1				
2	STR2	0.07381	2	0.06250	199.531	1479.06	0.13490
3	STR3	0.06241	5				

No	Node	G-Means	Rank	U	S	Max S	W
4	STR4	0.07339	3				
5	STR5	0.06658	4				
6	STR6	0.05018	6				
7	STR7	0.04750	8				
8	STR8	0.04786	7				

Empirically, Table 2 indicates that Kendall's W values across clusters range from 0.129 to 0.140. These values suggest a low-to-moderate level of agreement among experts. Rather than indicating weakness, this level of consensus is consistent with ANP studies addressing complex, multi-dimensional policy issues involving heterogeneous expert backgrounds (Schmidt, 1997).

Among the problem clusters, community-related issues exhibit the highest agreement (W = 0.14015). This empirical convergence suggests a shared recognition of infrastructure and access constraints in remote areas as a systemic challenge, reinforcing prior evidence on the role of physical and digital infrastructure in financial inclusion (Demirgüç-Kunt et al., 2018; World Bank, 2022). The competitor cluster shows a comparable W value (0.13732), reflecting common concern over the competitive advantage of conventional banking agents.

For solution clusters, Kendall's W values remain relatively stable across dimensions. This pattern indicates alignment on solution direction—particularly HR strengthening, product enhancement, and promotion—despite variation in preference intensity. According to Saaty and Vargas (2012), such agreement levels are sufficient to validate ANP synthesis when consistency ratios are acceptable.

The strategy cluster records a W value of 0.13490, indicating moderate consensus on long-term priorities. This outcome reflects the forward-looking and strategic nature of the criteria, which are influenced by institutional, regulatory, and operational perspectives. Nonetheless, the convergence around human resource–centered and digital platform–oriented strategies reinforce the robustness of the ANP-derived priorities.

Overall, the Kendall's W results empirically support the credibility of the ANP findings while simultaneously highlighting the complexity of strategic decision-making in Islamic banking financial inclusion. The moderate agreement underscores the need for adaptive implementation strategies that accommodate institutional diversity and resource constraints.

5. Conclusion and Recommendation

5.1. Conclusion

This study examines strategies for developing Islamic banking financial inclusion services through Bank Syariah Indonesia (BSI) Agents using the Analytic Network Process (ANP) supported by expert judgment. The findings indicate that the effectiveness of BSI Agents as extended outlets for Islamic banking inclusion is constrained primarily by human resource–related issues, particularly low employee awareness, limited agent competence, and the lack of attractive incentive structures. These internal constraints are further exacerbated by external challenges, including aggressive promotion by conventional bank agents, inadequate infrastructure in remote areas, and persistently low levels of Islamic financial literacy.

The ANP results demonstrate that strengthening human resources is the most critical lever for improving agent performance and expanding Islamic banking inclusion. The prioritization of solutions highlights the importance of increasing the number of dedicated BSI Agent officers, integrating agent performance into key performance indicators (KPIs), and enriching product and service features offered by agents. At the strategic level, the study identifies an integrated approach that combines human resource development, robust and user-friendly digital platforms, and cluster-based agent management as the most effective pathway to enhance agent effectiveness. This integrated strategy is consistent with recent policy directions emphasizing digital financial inclusion and institutional capacity building within Islamic banking systems (OJK, 2023; World Bank, 2024).

The Kendall's Coefficient of Concordance (W) analysis indicates a moderate level of agreement among expert informants, which is considered acceptable in complex, multi-criteria decision-making contexts. This level of consensus supports the robustness and credibility of the ANP-derived priorities, while also reflecting the multidimensional and strategic nature of Islamic banking financial inclusion.

Overall, the study contributes to the literature by providing empirical evidence on the strategic role of Islamic banking agents in promoting financial inclusion, particularly within a large Muslim-majority emerging economy. In line with recent empirical findings on agent-based and digital Islamic finance initiatives (Demirgüç-Kunt et al., 2023; Islamic Financial Services Board, 2024), this study underscores that Islamic banking inclusion is not solely driven by product availability or infrastructure, but also by institutional commitment, human capital readiness, and effective governance mechanisms.

5.2. Recommendations

Based on the findings, several policy and managerial recommendations are proposed. First, Bank Syariah Indonesia should institutionalize the role of BSI Agents by increasing the number of dedicated personnel responsible for agent management, strengthening product knowledge, and formally embedding agent activation and performance into the bank's KPI system. This step is essential to ensure accountability, sustainability, and organizational alignment.

Second, BSI should prioritize the development of a robust, user-friendly, and integrated digital platform for agents, supported by continuous system upgrades and expanded product features. Such digital strengthening will enhance transaction efficiency, reduce operational risks, and improve the competitiveness of BSI Agents relative to conventional bank agents. This recommendation aligns with recent national digital finance roadmaps and the push for end-to-end digital service delivery in Islamic banking (OJK, 2024).

Third, a cluster-based agent management model accompanied by field supervisors should be implemented to improve monitoring, coaching, and performance evaluation, particularly in geographically dispersed and remote areas. This approach would enable more targeted interventions and capacity-building efforts.

Fourth, policymakers and regulators are encouraged to integrate Islamic banking agent development strategies with national financial inclusion programs, while simultaneously intensifying Islamic financial literacy initiatives. Collaborative efforts involving banks, regulators, educational institutions, and community organizations are crucial to building public trust and long-term adoption of Sharia-compliant financial services.

Future research should extend this study by incorporating quantitative customer-level or agent-level data to statistically validate the ANP-derived priorities and assess their impact on financial inclusion outcomes. In addition, cross-country comparative studies across Muslim-majority and dual-banking economies would provide valuable insights into the generalizability of agent-based Islamic banking strategies

under different regulatory and institutional settings. Longitudinal research designs are also recommended to capture dynamic changes in agent performance, digital adoption, and inclusion outcomes over time.

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