



A Penta Helix Framework for Sharia Insurance Adoption among Informal Workers in DKI Jakarta

Afidah Nur Aslamah^{1*}, Muhammad Galang Putra Santoso², Nadya Sabrina Az-Zahra³,
Thahani⁴

¹⁻⁴ Universitas Negeri Jakarta, Indonesia

Email: afidah.nur@unj.ac.id^{1*}, muhhammad.galang.putra@mhs.unj.ac.id², nadya.sabrina@mhs.unj.ac.id³

*Penulis Korespondensi: afidah.nur@unj.ac.id

Abstract. *This conceptual study develops a Penta Helix framework for strengthening sharia insurance adoption among informal workers in DKI Jakarta, supported by Focus Group Discussion (FGD) data from informal workers and sharia insurance experts. Informal workers often face income instability, occupational risks, and limited access to formal social protection, making sharia insurance relevant for inclusive risk management. However, its adoption remains limited due to low literacy, affordability concerns, limited trust, product complexity, and weak stakeholder collaboration. Using the Penta Helix perspective, this study maps the roles of academia, business, government, community, and media in enhancing awareness, accessibility, trust, and participation in sharia insurance. FGD insights provide contextual understanding of informal workers' needs, perceptions, and adoption barriers, while expert perspectives enrich the analysis of institutional challenges and strategic opportunities. The study proposes an integrated framework emphasizing collaborative literacy programs, affordable and simple product design, community-based distribution, regulatory support, and effective media communication. This research contributes to Islamic financial inclusion literature and offers practical implications for policymakers, sharia insurance providers, community organizations, and other stakeholders seeking to expand social protection for urban informal workers.*

Keywords: *DKI Jakarta; Informal Workers; Islamic Financial Inclusion; Penta Helix; Sharia Insurance.*

1. INTRODUCTION

Informal workers constitute one of the most dynamic yet vulnerable segments of urban economies. In metropolitan areas such as DKI Jakarta, they sustain everyday mobility, household consumption, food services, small trade, digital-platform delivery, domestic work, and numerous micro-scale services that keep the city functioning. Recent labor statistics show that informal employment remains structurally significant in Jakarta. BPS DKI Jakarta reported that 1.98 million people worked in the informal sector in August 2025, while recent news coverage also highlighted an increase in informal workers in Jakarta in February 2026 (ANTARA News, 2026b; Badan Pusat Statistik Provinsi DKI Jakarta, 2025). This condition indicates that informality is not a marginal phenomenon, but a central feature of Jakarta's urban economy. At the same time, informal workers commonly lack stable wages, formal employment benefits, and predictable social protection mechanisms. Their economic contribution is therefore accompanied by persistent vulnerability, particularly when income volatility intersects with limited access to risk-protection instruments (Madya, 2024).

The vulnerability of informal workers is not limited to labor status. It also reflects exposure to shocks that can quickly disrupt household welfare, including illness, accidents, business interruptions, and income loss. For daily earners, micro-entrepreneurs, ride-hailing

drivers, couriers, street vendors, and other informal workers, even a relatively small unexpected expense can reduce working capital, constrain consumption, or force households to borrow. This issue has become increasingly relevant in Indonesia, as recent public discussions have emphasized the need to expand social security and adapt worker protection to the changing world of work, especially for informal and platform-based workers (Universitas Gadjah Mada, 2026; ANTARA News, 2026a). The research proposal underlying this article similarly emphasizes that informal urban workers face fluctuating income, limited risk protection, and health-cost shocks that may reduce household welfare and productivity. It also positions sharia insurance as a potential instrument for strengthening protection among workers who remain underserved by formal schemes.

In this context, sharia insurance, commonly associated with *takaful* principles, offers a relevant alternative for strengthening inclusive risk management. *Takaful* is built on mutual assistance, risk sharing, and solidarity among participants. Unlike purely individualistic insurance logic, sharia insurance is normatively aligned with the values of cooperation, transparency, and fairness. This value orientation may be especially relevant for Muslim communities and informal workers who prefer financial protection mechanisms that are consistent with Islamic principles. The Society of Actuaries describes *takaful* as an alternative insurance approach based on mutual support and participant risk sharing (Actuaries, 2024). Nevertheless, the practical adoption of sharia insurance remains challenging, particularly when potential users have limited literacy regarding insurance contracts, contribution mechanisms, claim procedures, and the distinction between conventional insurance and *takaful*. Therefore, the issue is not merely product availability, but also the extent to which informal workers understand, trust, access, and perceive value in the product (Maf'ula & Mi'raj, 2022; Salman & Kawata, 2022).

The Indonesian insurance sector has shown institutional resilience and growth potential. OJK reported that the national insurance industry's assets reached Rp1,192.11 trillion in October 2025, growing 5.16 percent year-on-year, while commercial insurance premiums reached Rp272.78 trillion during January-October 2025 (Otoritas Jasa Keuangan, 2025). At the global level, Islamic finance has also continued to develop, with the Islamic Financial Services Board emphasizing the need for coordinated action to deepen Islamic financial markets and sustain growth momentum (Islamic Financial Services Board, 2025). However, this macro-level progress does not automatically translate into adoption among vulnerable urban groups. The persistence of low understanding, weak trust, affordability concerns, and limited outreach suggests a gap between institutional development and inclusive access. For informal workers,

adoption decisions are shaped not only by religious compatibility, but also by perceived usefulness, affordability, trustworthiness, simplicity, and the ability of providers and stakeholders to communicate product value in a clear and context-sensitive manner.

Existing studies on takaful adoption have generally emphasized behavioral and perceptual determinants, including attitude, subjective norms, perceived behavioral control, religiosity, awareness, perceived benefits, trust, and financial literacy. Research grounded in the Theory of Planned Behavior explains that intention is a central predictor of behavior and is influenced by attitude, subjective norms, and perceived behavioral control (Ajzen, 1991). In the takaful context, Husin & Ab Rahman (2016) show that Muslim consumers' intention to participate in Islamic insurance can be explained through the Theory of Planned Behavior. Aziz et al. (2019) further demonstrate the mediating role of perceived trust in family takaful purchase intention, while Raza et al. (2019) extend the Theory of Planned Behavior to explain Islamic insurance adoption. More recent studies also show that takaful adoption is shaped by behavioral, social, and trust-related factors among specific market segments, including MSME entrepreneurs and family takaful customers (Rifas et al., 2023; Shaikh & Amin, 2024). These studies confirm that adoption is not simply a rational calculation of price and benefit, but a behavioral process shaped by information, beliefs, social influence, and institutional confidence (Albanna & Nurdany, 2022; Poan et al., 2022; Sarfraz & Mian, 2022; Zainordin et al., 2022).

Despite these contributions, two gaps remain important. First, much of the takaful adoption literature focuses on general consumers, existing customers, students, or formal-sector populations, while informal workers are underrepresented. This is problematic because informal workers face distinct constraints: irregular income, uncertain cash flow, limited time to process complex product information, and higher sensitivity to claim uncertainty. Second, previous studies often discuss knowledge, awareness, or literacy in broad terms, while less attention is given to the clarity of contracts, policy terms, contribution schemes, exclusions, and claims procedures. A bibliometric review of takaful literature also indicates that the field has grown, but still requires broader contextual and thematic development to address emerging inclusion challenges (Khan et al., 2020). For informal workers, ambiguity surrounding contracts and claims may become a decisive barrier. Even when they view sharia insurance positively, unclear akad, unclear benefits, or uncertainty regarding claim procedures can delay or prevent adoption (Mohd Damit & Mohammed, 2024; Muhammad Nasir et al., 2023).

The background of this study therefore extends the proposal's original concern with determinants of adoption and willingness to pay by positioning stakeholder collaboration as a

central explanatory and practical framework. The research proposal emphasizes that informal urban workers experience income vulnerability, limited protection, and potential health-cost shocks, while sharia insurance adoption is constrained by low literacy, limited understanding of akad and policy terms, and trust issues. The proposal also identifies key determinants such as sharia insurance literacy, clarity of akad and policy provisions, trust, perceived benefits, social norms, and household economic factors, including income level and income volatility. Building on this foundation, the present article argues that these barriers cannot be addressed only through individual-level interventions. Instead, adoption requires an ecosystem approach that aligns education, product design, regulation, community mediation, and public communication.

The Penta Helix framework is appropriate because sharia insurance adoption among informal workers cannot be solved by insurers alone. Academia can contribute through evidence-based literacy models, segmentation studies, instrument development, and evaluation of adoption barriers. Business actors, especially sharia insurance providers, can design affordable, simple, flexible, and transparent products that fit informal workers' income patterns. Government can provide regulatory support, social-protection alignment, incentives, and policy coordination. Communities can act as trusted intermediaries, especially in worker associations, religious communities, cooperatives, marketplaces, and neighborhood-based groups. Media can translate technical information into accessible messages, counter misinformation, and normalize sharia insurance as a practical risk-management instrument. In this way, the Penta Helix perspective broadens the study from individual willingness to adopt toward the institutional and social conditions that make adoption possible (Hibrizi, 2023; Pratama et al., 2023).

The empirical support for this conceptual study is drawn from Focus Group Discussion (FGD) data involving informal workers and sharia insurance experts. This design allows the article to remain conceptual while being grounded in field-based insights. Informal workers' perspectives are important for identifying lived barriers such as affordability, irregular income, distrust, limited product knowledge, and hesitation toward long-term financial commitments. Expert perspectives are equally important for clarifying institutional constraints, product-design challenges, regulatory issues, and possible strategies for improving communication, distribution, and public trust. This approach is consistent with the proposal's initial methodological direction, which places FGD and limited interviews as an exploratory stage to map information frictions, identify sources of hesitation, and validate indicators before broader empirical testing.

This article contributes to the literature in three ways. First, it brings informal workers more explicitly into the discourse on Islamic financial inclusion and sharia insurance adoption. Second, it advances the discussion beyond individual intention by emphasizing the ecosystem conditions required for adoption. Third, it develops a Penta Helix-based conceptual framework that integrates literacy, trust, affordability, product clarity, community engagement, and media communication. By doing so, the study offers a bridge between takaful adoption theory, urban informality, and collaborative governance. It also responds to the practical need for more inclusive protection models in DKI Jakarta, where informal workers play a major economic role but remain exposed to financial and social risks.

Accordingly, the central question addressed in this article is: how can the Penta Helix framework be used to strengthen sharia insurance adoption among informal workers in DKI Jakarta? More specifically, the article seeks to map the roles of academia, business, government, community, and media in addressing adoption barriers related to literacy, trust, affordability, access, and product clarity. The article does not treat the Penta Helix merely as a stakeholder list, but as a collaborative architecture for transforming sharia insurance from a formal financial product into an accessible, trusted, and socially embedded protection mechanism for informal workers.

2. LITERATURE REVIEW

The literature on sharia insurance, or takaful, generally positions the product as a risk-sharing mechanism grounded in mutual assistance, ethical governance, and sharia compliance. In contrast to conventional risk transfer, takaful emphasizes collective pooling and the separation of participant funds from operator funds. This conceptual distinction makes takaful relevant for Muslim communities and for broader financial inclusion agendas. Nevertheless, previous studies show that the existence of sharia-compliant products does not automatically lead to adoption. Consumers still require knowledge, trust, product clarity, affordability, and accessible distribution channels before they are willing to participate (Beshir et al., 2023; Rapi & Kassim, 2023).

The Theory of Planned Behavior (TPB) remains one of the most widely used theoretical bases in takaful adoption research. TPB explains that behavioural intention is shaped by attitude toward the behaviour, subjective norms, and perceived behavioural control (Ajzen, 1991). In the takaful context, empirical and conceptual studies have shown that attitude, subjective norms, perceived behavioural control, religiosity, and trust influence intention to participate in Islamic insurance (Aziz et al., 2019; Husin & Ab Rahman, 2016; Maduku &

Mbeya, 2024). The strength of this literature is its ability to explain individual-level intention. However, many studies still focus on general Muslim consumers or family takaful markets, while the specific realities of informal workers, such as income volatility, unstable daily cash flow, and limited social protection, remain underexplored (Husin & Ab Rahman, 2016).

Trust has also been identified as a crucial determinant of takaful adoption. Aziz et al. (2019) demonstrate that perceived trust mediates the relationship between religiosity and attitude toward family takaful, indicating that consumers may value religious alignment but still require confidence in the provider. This finding is important for sharia insurance because trust is not only related to brand reputation, but also to perceptions of sharia compliance, transparency of fund management, fairness of claims, and clarity of contractual terms. However, previous studies often conceptualize trust broadly and do not sufficiently separate trust in the institution from trust generated by clear akad, simple policy wording, transparent exclusions, and reliable claims procedures.

Another important stream of literature concerns financial literacy and Islamic financial inclusion. Financial literacy is widely associated with better financial decision-making because it strengthens individuals' ability to understand risk, compare products, and evaluate long-term consequences (Lusardi & Mitchell, 2014). In the Islamic finance context, literacy is not limited to general financial knowledge; it also includes understanding sharia contracts, risk-sharing principles, tabarru', ujah, claims mechanisms, and the ethical foundation of financial products. The weakness in previous adoption studies is that literacy is often treated as a general awareness variable, while the specific informational friction created by unclear akad and policy terms is rarely positioned as an independent conceptual issue (Muttaqien et al., 2025; Rahmati, 2025).

Studies on informal workers highlight that vulnerability is not only related to low income, but also to income instability, occupational risk, limited bargaining power, and limited access to contributory social protection. Institutional reports on Indonesia's informal economy show that informality remains substantial and creates constraints for social protection expansion (Hapsari & Pape, 2023). For informal workers, a small but sudden health or work-related shock can disrupt household cash flow and reduce productive capacity. This condition makes sharia insurance relevant, but also creates a dilemma: the group that needs protection most may also have the most limited ability to pay regular contributions. Therefore, willingness to pay and flexible product design are central issues in expanding takaful adoption among informal workers (Madya, 2024).

Recent literature has begun to connect takaful with broader financial inclusion and social protection agendas. Radiamoda (2025) for example, emphasizes the potential of microtakaful partnerships to provide financial security for vulnerable groups, while Berto et al. (2025) discuss the urgency of takaful-based protection for gig workers through a Penta Helix model. These studies are useful because they move beyond individual intention and begin to frame takaful adoption as an ecosystem issue. However, they still leave room for more contextual conceptual development, especially in relation to urban informal workers in DKI Jakarta and the use of FGD and expert-interview insights to ground the framework.

The Penta Helix model offers a useful lens to address this ecosystem gap. The model emphasizes collaboration among academia, business or industry, government, community, and media. Studies on penta-helix collaboration show that multi-stakeholder models can strengthen innovation, public participation, and policy implementation when each actor contributes according to its function (Forss et al., 2021). In the context of sharia insurance, academia can provide evidence and literacy tools, business actors can design affordable products and accessible distribution, government can support regulation and consumer protection, community actors can build social trust and peer influence, and media can amplify information transparency and awareness (Hibrizi, 2023; Pratama et al., 2023).

Based on this state of the art, the present study addresses three key limitations. First, prior takaful adoption studies have focused primarily on behavioural intention, while paying less attention to the specific informational friction created by unclear akad, policy benefits, exclusions, and claims procedures. Second, studies on microtakaful and vulnerable groups often emphasize inclusion conceptually but provide limited contextual evidence from informal workers. Third, Penta Helix studies are frequently applied to innovation, tourism, public health, or social-finance development, while their application to sharia insurance adoption among urban informal workers remains limited. Therefore, this study positions its novelty in developing a Penta Helix framework that integrates behavioural adoption factors, product-clarity issues, affordability, trust, and stakeholder collaboration, supported by FGD data from informal workers and expert interviews with sharia insurance stakeholders.

3. METHODOLOGY

Research Type and Design

This study employs a conceptual research design supported by qualitative exploratory data. Conceptual research is appropriate because the main objective is to develop a theoretical and practical framework rather than to test causal relationships statistically. The study uses the

Penta Helix perspective to explain how stakeholder collaboration can strengthen sharia insurance adoption among informal workers in DKI Jakarta.

The research design is exploratory because the study seeks to understand adoption barriers, stakeholder roles, and possible collaborative strategies. The conceptual framework is developed through a synthesis of previous scholarly articles and refined using qualitative insights from Focus Group Discussion (FGD) data involving informal workers and interviews with sharia insurance experts.

Research Approach

The approach used in this study is qualitative-conceptual. The conceptual component was conducted through a structured review and synthesis of previously published scholarly journal articles on takaful adoption, TPB, trust, Islamic financial literacy, microtakaful, informal-worker vulnerability, and Penta Helix collaboration. The qualitative component was used to provide contextual grounding so that the proposed framework reflects the perceptions, needs, and barriers experienced by informal workers and the strategic perspectives of sharia insurance experts.

Data Sources

The study uses two main data sources. First, secondary data were obtained from scholarly journal articles, conceptual papers, and selected institutional reports relevant to sharia insurance, informal workers, and financial inclusion. The journal articles were used to establish the state of the art and identify research gaps. Second, primary qualitative data were obtained from FGD and semi-structured interviews. The FGD data represent the perspectives of informal workers regarding risk exposure, income uncertainty, insurance literacy, trust, access, and willingness to participate. Expert interviews were used to capture institutional and industry perspectives on product design, claims service, regulation, literacy strategy, and stakeholder collaboration.

Data Collection Techniques

The literature data were collected through purposive literature searching using keywords such as takaful adoption, sharia insurance, Islamic insurance, Islamic financial literacy, trust, Theory of Planned Behavior, informal workers, microtakaful, and Penta Helix. Articles were prioritized when they were published in scholarly journals, directly related to adoption behaviour or stakeholder collaboration, and useful for identifying the strengths and weaknesses of previous research.

The FGD and interview process was supported by a discussion guide. Informal workers were encouraged to explain their own experiences with risk, income uncertainty, BPJS

or insurance-related services, and their willingness or reluctance to pay for additional protection. Sharia insurance experts were asked to provide their views on market barriers, consumer trust, product simplicity, claims transparency, and the role of different stakeholders in expanding adoption.

Table 1. Methodological Matrix

Component	Description	Application in this study
Type of research	Conceptual study supported by qualitative exploratory data.	Develops a Penta Helix framework for sharia insurance adoption.
Approach	Qualitative-conceptual and interpretive.	Synthesizes literature and interprets FGD/interview insights.
Secondary data	Published scholarly journal articles and selected institutional reports.	Used to establish state of the art, strengths, weaknesses, and research gaps.
Primary data	FGD and semi-structured interviews.	Used to capture informal workers' needs, barriers, trust issues, and expert perspectives.
Data collection	Purposive literature review, FGD, and expert interview.	Collects theoretical and contextual evidence for framework development.
Data analysis	Narrative synthesis and thematic analysis.	Maps findings into Penta Helix actor roles and expected outcomes.

Data Analysis

The data analysis consisted of two stages. First, the literature was analyzed through narrative synthesis. Each study was reviewed to identify its theoretical basis, variables, findings, strengths, and limitations. The synthesis was then used to formulate the research gap and to justify the need for a Penta Helix framework in the context of sharia insurance adoption among informal workers.

Second, the FGD and interview data were analyzed thematically using the logic of qualitative thematic analysis (Braun et al., 2008). The analysis focused on repeated themes related to literacy, affordability, trust, policy clarity, distribution access, social influence, and stakeholder roles. Relevant statements from participants were grouped into themes and then interpreted in relation to the five Penta Helix actors.

After the themes were identified, they were mapped into the Penta Helix framework. Academia was linked to research, literacy modules, and evaluation tools. Business or industry was linked to affordable products, simple policy design, accessible distribution, and claims service. Government was linked to regulation, incentives, and consumer protection. Community was linked to peer influence, trust building, and local distribution. Media was linked to awareness, digital campaigns, and information transparency.

Trustworthiness and Ethical Considerations

To strengthen trustworthiness, the study used triangulation between published literature, FGD data, and expert interview insights. The use of different sources helped reduce reliance on a single perspective and enabled the authors to compare theoretical constructs with field-based realities. The qualitative data were also interpreted carefully by focusing on patterns rather than isolated statements. Informants may be anonymized in the article using codes such as IW for informal workers and EXP for experts to protect participant identity.

Expected Analytical Output

The methodological process is expected to produce a conceptual framework that explains how sharia insurance adoption among informal workers can be strengthened through coordinated Penta Helix collaboration. The framework is expected to show that adoption is influenced not only by individual intention, literacy, and trust, but also by the quality of stakeholder interaction, product accessibility, community endorsement, regulatory support, and public communication. Therefore, the output of this study is not merely a list of adoption determinants, but a collaborative model that can guide future empirical testing, policy recommendations, and product-development strategies.

4. DISCUSSION

Barriers to Sharia Insurance Adoption among Informal Workers

This section discusses the first major finding of the study: sharia insurance adoption among informal workers in DKI Jakarta is constrained not only by low awareness, but also by the interaction between income uncertainty, limited product literacy, ambiguity of contractual information, and fragile trust. The FGD insights indicate that informal workers generally recognize the importance of protection against illness, accidents, and income disruption, yet they tend to delay participation when the product is perceived as complicated, costly, or uncertain in terms of claim outcomes. This finding is consistent with the Theory of Planned Behavior, which explains that intention is shaped by attitude, subjective norms, and perceived behavioural control. In this study, however, perceived behavioural control is not merely an

individual psychological factor. It is strongly shaped by workers' irregular income, limited time to compare products, and uncertainty about whether the contribution scheme can be maintained during periods of low income.

Table 2. FGD Informants

No.	Category	Informant Profile	Number
1	Informal worker	Online motorcycle taxi driver (ojol)	1 person
2	Informal worker	Labour worker	1 person
3	Informal worker	Freelancer	2 persons
4	Informal worker	Private tutor	1 person
5	Expert/practitioner	Sharia insurance practitioner	1 person

Source: FGD data processed by the authors.

The findings extend previous takaful adoption studies by showing that positive attitudes toward sharia-based financial protection do not automatically produce adoption. Husin & Ab Rahman (2016) demonstrate that attitude, subjective norms, and perceived behavioural control influence intention to participate in Islamic insurance. The present study supports these arguments but adds that, for informal workers, intention is filtered through the practical logic of daily survival. Participants may accept the religious and ethical values of takaful, but their willingness to participate depends on whether the product fits their cash-flow reality. This is particularly important for daily earners, micro-traders, ride-hailing drivers, couriers, and other informal workers whose income can fluctuate from day to day. Therefore, the adoption decision is not simply a matter of whether workers view sharia insurance as good, but whether they perceive it as usable, affordable, and reliable under unstable economic conditions (Albanna & Nurdany, 2022; Mahri et al., 2023).

The discussion also confirms the central role of literacy, but it refines the meaning of literacy in the context of sharia insurance. Previous financial literacy literature emphasizes the importance of knowledge for better financial decision-making (Lusardi & Mitchell, 2023). In the Islamic finance context, literacy must include not only general understanding of insurance benefits but also knowledge of akad, tabarru', ujah, risk sharing, exclusions, claim procedures, and participant rights. The FGD insights suggest that many adoption barriers emerge because potential users do not clearly understand what they are paying for, how claims are processed, what risks are covered, and what conditions may lead to claim rejection. This finding indicates that literacy should not be treated as a broad awareness campaign only. It must be translated

into contract literacy, claim literacy, and benefit literacy that can be understood by workers with diverse educational backgrounds (Muhammad Nasir et al., 2023; Zubair et al., 2023).

The issue of product clarity is closely related to trust. Aziz et al. (2019) show that perceived trust plays a mediating role in family takaful purchase intention. This study supports that finding, but it also shows that trust among informal workers is built through concrete experiences and simple explanations rather than abstract institutional reputation alone. Workers may distrust insurance products when they hear stories about difficult claims, hidden exclusions, complicated documents, or unclear benefit payments. In this sense, trust is not merely confidence in the insurer's brand or sharia label. It is generated through transparent akad, understandable policy wording, visible claim evidence, and consistent communication from trusted intermediaries. This differs from some previous studies that treat trust as a general perceptual variable without sufficiently unpacking the operational sources of trust in product design and service delivery (Muhammad Zuki et al., 2026; Poan et al., 2022).

Affordability appears as another decisive theme. The FGD insights indicate that informal workers evaluate sharia insurance contributions against immediate household needs such as food, transportation, children's education, rent, debt repayment, and business capital. Even when the nominal contribution appears low from the provider's perspective, it may still be perceived as burdensome if payment is rigid, recurring, and disconnected from income cycles. This finding is aligned with studies on vulnerable workers showing that informality is associated with income instability and limited access to contributory social protection. It also explains why microtakaful or flexible takaful designs are relevant for underserved groups. Radiamoda (2025) emphasizes the need for microtakaful partnerships to provide financial security for vulnerable communities. The present study strengthens this view by highlighting that affordability must be understood not only as low price, but also as flexible timing, simple enrollment, proportional benefits, and low transaction costs (Beshir et al., 2023; Rapi & Kassim, 2023).

Social norms and community influence also shape adoption. Consistent with TPB, subjective norms influence individual intention when people consider the expectations and experiences of others around them. In the informal-worker context, peer experience can be more persuasive than formal advertising. When community leaders, worker associations, religious groups, cooperative managers, or fellow workers explain a product and share successful claim experiences, potential participants are more likely to view sharia insurance as credible. Conversely, negative stories about claim failure or product confusion can spread quickly and reduce willingness to participate. This finding extends the work of Shaikh & Amin

(2024), who emphasize interpersonal behaviour in family takaful choice, by showing that interpersonal influence among informal workers is embedded in daily work networks and local communities (Husin & Ab Rahman, 2016; Zainordin et al., 2022).

Overall, Discussion I shows that sharia insurance adoption among informal workers is shaped by a multi-layered adoption barrier. The first layer is cognitive, involving limited understanding of sharia insurance concepts and product mechanisms. The second layer is economic, involving income volatility and affordability concerns. The third layer is institutional, involving trust in providers, claim fairness, and transparency. The fourth layer is social, involving peer influence and community endorsement. Compared with prior adoption studies that mainly explain intention through individual behavioural determinants, this study demonstrates that informal workers' adoption decisions are structurally embedded in economic vulnerability and information asymmetry. Therefore, any strategy to strengthen adoption must go beyond motivational campaigns and address the practical conditions that determine whether workers can understand, trust, afford, and continuously participate in sharia insurance.

Penta Helix Strategy for Sharia Insurance Inclusion

The second major finding of this study is that the adoption barriers identified in Discussion I cannot be addressed by sharia insurance providers alone. As illustrated in Figure 1, the proposed Penta Helix framework places sharia insurance adoption among informal workers in DKI Jakarta at the center of collaboration among five actors: academia, business/industry, government, community, and media. The framework shows that each actor contributes a specific function to overcome literacy gaps, affordability constraints, access barriers, weak trust, and limited participation. In this sense, the Penta Helix approach shifts the discussion from individual intention to collaborative governance. Forss et al. (2021) show that penta-helix collaboration can support public participation and innovation when actors contribute according to their respective capacities. In the present study, the framework is used to explain how these capacities can be coordinated to create higher literacy, greater trust, better access, and increased participation in sharia insurance.

Academia occupies the first role in the framework through research and evidence, financial literacy programs, policy input, and evaluation tools. Universities and research institutions can transform literacy from general socialization into evidence-based education by developing simplified modules on akad, tabarru', ujah, claims procedures, exclusions, and participant rights. Academia can also measure informal workers' understanding, identify segment-specific willingness to pay, and evaluate which communication methods are most effective for different worker groups. This role is important because prior takaful studies have

produced valuable behavioural models, yet many of them focus on general consumers and do not sufficiently address the specific realities of informal workers. Ayub & Khan (2021) note that takaful literature has grown but still requires broader thematic and contextual development. The current study responds to this gap by positioning informal workers in DKI Jakarta as a specific group whose adoption requires tailored literacy instruments and field-based policy learning (Muttaqien et al., 2025; Zubair et al., 2023).

Business or industry actors, especially sharia insurance providers, play the second role by ensuring affordable products, simple policy design, accessible distribution, and reliable claims service. The FGD insights indicate that informal workers need products that are simple, flexible, and transparent. Therefore, providers should not only promote the sharia label, but also redesign the customer journey from registration to claim settlement. Product information should clearly explain contribution allocation, benefits, exclusions, waiting periods, claim documents, and claim timelines in language that is easy to understand. Contribution schemes should be compatible with irregular income, possibly through weekly, daily, seasonal, or pay-as-you-earn mechanisms. Distribution should also be closer to workers' everyday spaces, such as cooperatives, markets, religious communities, worker associations, and digital platforms (Maf'ula & Mi'raj, 2022; Rapi & Kassim, 2023).

Government forms the third role in the framework through regulatory support, consumer protection, incentives for inclusion, and public outreach. The findings suggest that informal workers are more likely to trust sharia insurance when it is connected to clear supervision and broader social-protection policy. Government support may include regulatory guidance for microtakaful products, incentives for inclusive insurance innovation, collaboration with local agencies, integration with worker-registration programs, and alignment with social-security expansion. Public outreach is also needed so that sharia insurance is not perceived only as a private financial product, but as part of an inclusive risk-protection agenda for urban workers. In DKI Jakarta, where informal employment remains structurally significant, policy coordination is essential to avoid fragmented programs. BPS DKI Jakarta (2026) reports on informal workers indicate that informality continues to be an important urban labour issue.

Community actors represent the fourth role through peer influence, collective awareness, community-based participation, and feedback on workers' needs. The study finds that informal workers often rely on social networks, peer experience, religious leaders, neighborhood groups, cooperatives, and worker communities when evaluating unfamiliar financial products. Community actors can translate technical language into practical

explanations, facilitate group enrollment, collect feedback, and help monitor whether products match actual worker needs. This role is especially important because trust in sharia insurance cannot be built only through formal advertising. It requires social embedding. Community-based participation can reduce psychological distance between providers and potential participants while creating collective learning through examples that are close to workers' daily lives.

Media has the fifth role in the framework through public education, digital campaigns, information transparency, and awareness building. The findings suggest that informal workers are more receptive to short, practical, and relatable messages than to technical explanations. Media actors, including digital media, local media, social media influencers, Islamic finance communicators, and community information channels, can help explain sharia insurance through simple stories, claim simulations, short videos, infographics, and testimonials. Media communication should avoid excessive jargon and focus on concrete questions: what is protected, how much is paid, when claims can be submitted, what documents are needed, and how sharia principles are implemented. This communication strategy is important because awareness without clarity may create superficial recognition but not actual participation (Muhammad Nasir et al., 2023; Sarfraz & Mian, 2022).

The Penta Helix framework in Figure 1 therefore integrates five collaborative functions that are directly linked to the expected outcomes. Academia produces evidence, literacy programs, policy input, and evaluation tools; business or industry provides affordable products, simple policy design, accessible distribution, and claims service; government ensures regulatory support, consumer protection, inclusion incentives, and public outreach; community strengthens peer influence, collective awareness, community-based participation, and feedback on needs; and media amplifies public education, digital campaigns, information transparency, and awareness building. These functions are mutually reinforcing. Academic research can inform product simplification, government can support inclusive pilot programs, communities can facilitate enrollment and feedback, media can communicate claim success stories, and insurers can provide transparent service data for evaluation. Without coordination, each actor may work in isolation and fail to address the full set of adoption barriers.

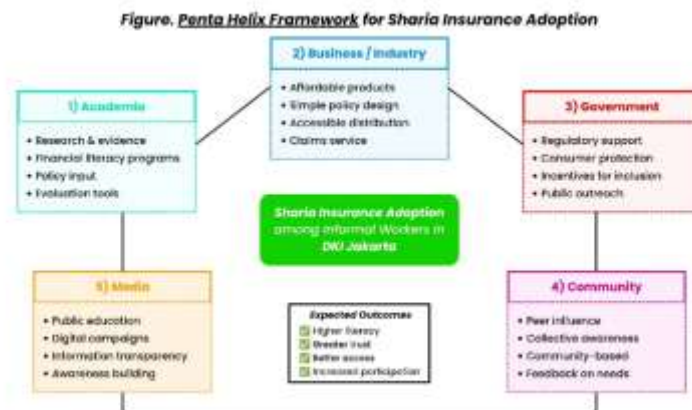


Figure 1. Penta Helix framework for strengthening sharia insurance adoption among informal workers (processed by authors)

This discussion differs from prior takaful adoption studies in three ways. First, while TPB-based studies explain intention at the individual level, this study shows that intention among informal workers is strongly affected by ecosystem conditions. Second, while trust has often been treated as a behavioural variable, this study links trust to policy clarity, claims transparency, community mediation, regulatory assurance, and information transparency. Third, while microtakaful literature emphasizes protection for vulnerable groups, this study specifies how Penta Helix collaboration can operationalize that protection in an urban informal-worker context through the five actor roles shown in Figure 1.

The practical implication is that increasing sharia insurance adoption requires a staged collaborative strategy consistent with the framework. The first stage is diagnosis, led by academia and supported by community feedback, to identify worker segments, risk exposure, income patterns, and literacy gaps. The second stage is simplification, led by business or industry, to redesign product information, contribution schemes, distribution channels, and claim procedures. The third stage is trust building, supported by government and community actors, through consumer protection, transparent claim evidence, and peer endorsement. The fourth stage is communication, strengthened by media through public education, digital campaigns, and information transparency. The fifth stage is evaluation, involving all actors, to measure literacy improvement, trust, access, participation, claim satisfaction, retention, and welfare relevance. This staged strategy transforms sharia insurance from a formal financial instrument into a socially embedded protection mechanism.

The theoretical implication is that Islamic financial inclusion should be understood as an ecosystem process rather than a product-access issue alone. For informal workers, inclusion requires institutional collaboration that connects values, affordability, literacy, trust, access, and service quality. Sharia insurance adoption is therefore not only a matter of religious

preference or individual intention; it is a collective process shaped by the ability of stakeholders to build a trustworthy protection architecture. The proposed Penta Helix framework contributes to takaful adoption literature by integrating behavioural determinants with collaborative governance and by showing that adoption among vulnerable workers depends on the interaction between research and evidence, product design, regulatory support, community participation, and media communication.

5. CONCLUSION

This study concludes that strengthening sharia insurance adoption among informal workers in DKI Jakarta requires more than individual awareness-building. Adoption is shaped by the interaction of literacy, affordability, product clarity, trust, social influence, and institutional support. The findings indicate that informal workers may recognize the value of protection, yet their participation depends on whether sharia insurance is perceived as understandable, affordable, flexible, trustworthy, and relevant to their unstable income patterns and occupational risks. Therefore, sharia insurance adoption should be approached as an ecosystem issue rather than merely a consumer intention issue.

The proposed Penta Helix framework positions academia, business, government, community, and media as complementary actors in building an inclusive protection system. Academia contributes evidence-based literacy and evaluation tools; business actors simplify products and improve service transparency; government strengthens regulation, consumer protection, and policy coordination; community actors mediate trust and support group-based participation; and media translates technical information into accessible public communication. Theoretically, this study contributes to the Islamic financial inclusion and takaful adoption literature by integrating behavioural adoption perspectives with collaborative governance. Practically, the framework offers guidance for policymakers, sharia insurance providers, community organizations, and communication actors in designing more contextual strategies for expanding social protection among urban informal workers. Future studies may empirically test the proposed framework using survey, case study, or mixed-method designs to examine how each Penta Helix actor influences literacy, trust, participation, retention, and perceived welfare benefits among informal workers.

REFERENCES

- Actuaries, S. (2024). *Takaful : An Alternative Approach to Insurance Takaful : An Alternative Approach to Insurance*.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Albanna, H., & Nurdany, A. (2022). Faktor-faktor yang memengaruhi masyarakat Muslim untuk mengadopsi asuransi syariah di Indonesia. *Etihad: Journal of Islamic Banking and Finance*, 2(2). <https://doi.org/10.21154/etihad.v2i2.3968>
- Ayub, M., & Khan, M. F. (2021). Evolving Monetary Economics in Islamic Perspective. *Journal of Islamic Monetary Economics and Finance*, 7(2), 317–340. <https://doi.org/10.21098/jimf.v7i2.1372>
- Aziz, S., Husin, M., & Hussin, N. (2019). *role of perceived trust Factors that influence individuals ' intentions to purchase family takaful mediating role of perceived trust*. <https://doi.org/10.1108/APJML-12-2017-0311>
- Berto, M. Al, Samsuri, A., & Al-farisy, M. D. (2025). *The Urgency of Takaful-Based Protection for Gig Workers through Pentahelix Model*. 4(2), 865–877.
- Beshir, H. A., Alhabshi, S. M., & Zakariyah, H. (2023). The potential of micro-takaful in improving financial inclusion among low-income households in Ethiopia. *Journal of Islamic Finance*, 12(2), 30–47. <https://doi.org/10.31436/jif.v12i2.823>
- Board, I. F. S. (2025). [Title not stated in article].
- Braun, V., Clarke, V., Braun, V., & Clarke, V. (2008). *Using thematic analysis in psychology*.
- Forss, K. S., Kottorp, A., & Rämgård, M. (2021). Collaborating in a Penta-Helix Structure within a Community Based Participatory Research Programme: “Wrestling with Hierarchies and Getting Caught in Isolated Downpipes.” *Archives of Public Health*, 79.
- Hapsari, I. M., & Pape, U. J. (2023). *Informality in Indonesia Levels , Trends , and Features*. (October).
- Hibrizi, E. (2023). Pemanfaatan model Pentahelix sebagai bentuk kolaborasi dalam meningkatkan inklusi keuangan melalui peer-to-peer lending syariah di Indonesia. *Educationist: Journal of Educational and Cultural Studies*, 2(1), 291–295.
- Husin, M. M., & Ab Rahman, A. (2016). Predicting intention to participate in family takaful scheme using decomposed theory of planned behaviour. *International Journal of Social Economics*, 43(12), 1351–1366. <https://doi.org/10.1108/IJSE-03-2015-0074>
- Jakarta, B. P. S. P. D. K. I. (2025). *Keadaan Ketenagakerjaan DKI Jakarta Agustus 2025*. BPS Provinsi DKI Jakarta.
- Kuangan, O. J. (2025). *Indonesia Insurance Sector Development Update 2025*. Otoritas Jasa Keuangan.
- Lusardi, A., & Mitchell, O. S. (2014). *of Financial Literacy : Theory and Evidence*. 52, 5–44.
- Lusardi, A., & Mitchell, O. S. (2023). The Importance of Financial Literacy: Opening a New Field. *Journal of Economic Perspectives*, 37(4), 137–154. <https://doi.org/10.1257/jep.37.4.137>
- Mada, U. G. (2026). [Title not stated in article].

- Maduku, D. K., & Mbeya, S. (2024). Understanding Family Takaful Purchase Behaviour: The Roles of Religious Obligation and Gender. *Journal of Financial Services Marketing*, 29(2), 440–458. <https://doi.org/10.1057/s41264-023-00213-z>
- Madya, S. H. (2024). Jaminan sosial pekerja informal: Studi webnografi. *Jurnal Jamsostek*, 2(2), 118–140. <https://doi.org/10.61626/jamsostek.v2i2.27>
- Maʼula, F., & Miʼraj, D. A. (2022). Islamic insurance in Indonesia: Opportunities and challenges on developing the industry. *Journal of Islamic Economic Laws*, 5(1). <https://doi.org/10.23917/jisel.v5i1.16764>
- Mahri, A. J. W., Juliana, J., Mutiara, R., Utami, S. A., & Munandar, D. (2023). Behavior to adopt sharia insurance in the midst of pandemic with religiosity as a moderator variable. *PINISI Discretion Review*, 6(2), 441–456. <https://doi.org/10.26858/pdr.v6i2.51464>
- Mohd Damit, M. R., & Mohammed, R. @ U. B. (2024). Descriptive study of demographic factors and takaful subscription in Kota Kinabalu Sabah based on the theory of planned behaviour. *International Student Conference on Business, Education, Economics, Accounting, and Management (ISC-BEAM)*, 1(1), 706–723. <https://doi.org/10.21009/ISC-BEAM.011.50>
- Muhammad Nasir, N. I., Hassan, R., & Osman, A. Z. (2023). Spectrum of consumer awareness in Islamic finance: Takaful industry in Malaysia. *The Journal of Muamalat and Islamic Finance Research*, 20(2), 125–134. <https://doi.org/10.33102/jmifr.513>
- Muhammad Zuki, M. F., Ishak, M. A. F., & Hassan, M. H. (2026). The mediating impact of institutional trust on family takaful participation behavioural intentions. *ETIKONOMI*, 25(1). <https://doi.org/10.15408/etk.v25i1.43919>
- Muttaqien, M. K., Kartika, R. F., Sopa, S., & Idrus, A. (2025). The role of religiosity and financial literacy in the adoption of Islamic digital services in Indonesia. *Share: Jurnal Ekonomi Dan Keuangan Islam*, 14(1), 447–471. <https://doi.org/10.22373/share.v14i1.26315>
- News, A. (2026a). [2026a title not stated in article].
- News, A. (2026b). [2026b title not stated in article].
- Poan, R., Merizka, V. E., & Komalasari, F. (2022). The importance of trust factor in the intentions to purchase Islamic insurance (takaful) in Indonesia. *Journal of Islamic Marketing*, 13(12), 2630–2648. <https://doi.org/10.1108/JIMA-01-2021-0026>
- Pratama, I. N., Ibrahim, A. H., & Akbar, P. (2023). Pentahelix collaboration concept as an effort to accelerate poverty reduction in the Covid-19 situation in the City of Mataram. *Jurnal Public Policy*, 9(1), 75. <https://doi.org/10.35308/jpp.v9i1.6439>
- Radiamoda, A. M. (2025). *The Need for Micro or Takaful in Islamic Insurance Partnerships in the Philippines*. 10(1), 41–50.
- Rapi, M. Z. H., & Kassim, S. (2023). Perception and Intention to Participate in Microtakaful Scheme among Indonesians: An Application of Ajzen’s Theory of Planned Behavior. *Journal of Islamic Monetary Economics and Finance*, 9(1), 133–166. <https://doi.org/10.21098/jimf.v9i1.1615>
- Raza, S. A., Ahmed, R., Ali, M., & Qureshi, M. A. (2019). *In fl uential factors of Islamic insurance adoption : an extension of theory of planned behavior adoption*. <https://doi.org/10.1108/JIMA-03-2019-0047>

- Rifas, A. H., Rahman, A. A., Buang, A. H., & Talib, M. A. (2023). Involvement of Micro, Small and Medium Entrepreneurs (MSMEs) in Takaful in Sri Lanka: An Extension of Theory of Planned Behaviour. *Journal of Islamic Marketing*, 14(11), 2715–2740. <https://doi.org/10.1108/JIMA-11-2021-0371>
- Salman, S. A., & Kawata, Y. (2022). Muslims' perception of Islamic insurance (takaful) in Malaysia. *Journal of Islamic Finance*, 11(1), 51–66. <https://doi.org/10.31436/jif.v11i1.635>
- Sarfraz, A., & Mian, A. K. (2022). The impact of values on consumer adoption of takāful with mediating role of religiosity and moderating role of confusion. *Journal of Islamic Marketing*, 13(10), 2126–2143. <https://doi.org/10.1108/JIMA-01-2021-0006>
- Shaikh, I. M., & Amin, H. (2024). Customers' Willingness to Choose Family Takaful: Extending the Theory of Interpersonal Behaviour. *Journal of Islamic Accounting and Business Research*, 15(1), 100–118. <https://doi.org/10.1108/JIABR-04-2022-0113>
- Statistik, B. P. (2025). 2303004.31.
- Zainordin, N. A., Engku Ali, E. R. A., & Haron, R. (2022). Factors influencing behavioral intention to participate in family takaful in Malaysia: An extension of UTAUT2 theory. *Journal of Islamic Finance*, 11(2), 68–83. <https://doi.org/10.31436/jif.v11i2.691>
- Zubair, N. F., Saipul, F., Shafii, Z., & Alwi, K. (2023). Enhancing ESG integration in takaful through financial education: Case study of financial literacy programme in a takaful operator. *I-IECONS E-Proceedings*, 10(1), 954–959. <https://doi.org/10.33102/ieicons.v10i1.118>