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Islamic Green Finance and Renewable Energy in OIC Countries: Integrating Ethics and Sustainability

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Abstract

The urgency of renewable energy development in OIC (Organization of Islamic Cooperation) countries is exacerbated by climate vulnerability and energy insecurity. Islamic green finance—rooted in *sharīʿah*-compliant principles of risk-sharing, ethical investment, and environmental stewardship—offers a promising solution to bridge financing gaps in this critical sector. This conceptual study explores the potential of Islamic green finance to support renewable energy development, focusing on the alignment of Islamic legal principles with sustainability goals. Using a qualitative approach grounded in document analysis, the paper investigates the applicability of financial instruments such as green *sukuk*, *mushārakah*, and *wakālah* contracts in the context of energy transition. Findings indicate a strong theoretical compatibility, but practical implementation is hindered by regulatory fragmentation, limited technical capacity, and underdeveloped market infrastructure. The study proposes pathways including regulatory harmonization, capacity building, and public-private partnerships to unlock the full potential of Islamic green finance. By bridging the gap between ethics and environmental policy, this research contributes to both academic discourse and practical policymaking in sustainable finance across the Islamic world.

Keywords

Islamic green finance; renewable energy financing; *maqāṣid al-sharīʿah*; green sukuk; OIC countries

Introduction

The urgency of transitioning toward renewable energy sources is no longer a peripheral agenda, but a core development objective globally. For OIC (Organization of Islamic Cooperation) member countries, which are disproportionately vulnerable to climate change impacts and energy insecurity, the shift toward green energy is both a moral imperative and an economic necessity (World Bank, 2010). With a significant share of the population residing in resource-scarce or fossil fuel-dependent regions, the OIC bloc faces structural challenges in financing the renewable energy transition (IEA, 2011). While international green finance instruments have proliferated, they often fail to account for *sharī'ah* principles, creating a disconnect in Muslim-majority economies.

Islamic finance, rooted in principles of risk-sharing, ethical investing, and the prohibition of interest (*ribā*), offers a compelling alternative to conventional finance (Siddiqi, 2006; Chapra, 2000, p. 33). Its emphasis on socio-economic justice, environmental stewardship, and asset-backed financing provides a robust framework for sustainable development (Khan & Mirakhor, 2004). In recent years, instruments such as green *sukuk* and environmentally aligned *mushārakah* ventures have gained traction, signaling the convergence of green and Islamic finance domains (El-Gamal, 2006, p. 142). However, this convergence remains embryonic in scope and fragmented in practice, particularly across OIC jurisdictions (Obaidullah, 2005, p. 88).

The theoretical significance of this study lies in its exploration of the congruence between *maqāṣid al-sharī'ah* (higher objectives of Islamic law) and sustainable finance, especially in renewable energy investment. Empirically, the research addresses a critical gap: the absence of comprehensive frameworks that integrate Islamic finance into green development strategies in Muslim-majority contexts (Ariff & Iqbal, 2001, p. 109). Although studies have examined Islamic finance and green investment independently, the intersection of these fields within the OIC bloc remains underexplored.

This study addresses the following research questions: (1) How can Islamic financial principles support green finance initiatives in OIC countries? (2) What are the main institutional and regulatory challenges in implementing Islamic green finance for renewable energy? (3) What models and instruments are most effective for scaling Islamic green finance in OIC nations? By investigating these questions, the paper aims to advance a nuanced understanding of the opportunities and limitations inherent in Islamic green finance.

The objectives of this research are threefold. First, to critically evaluate the alignment of Islamic finance with green finance principles. Second, to identify regulatory, institutional, and operational barriers to its implementation. Third, to propose

actionable frameworks and instruments that can enhance renewable energy financing through *sharīʿah*-compliant channels. The findings are expected to benefit policymakers, Islamic financial institutions, investors, and scholars seeking sustainable financing paradigms tailored to Islamic ethical frameworks.

Literature Review

The literature on green finance has evolved significantly over the past two decades, reflecting growing concern over climate change and environmental degradation. Green finance refers to financial investments that support sustainable environmental outcomes, typically through renewable energy, energy efficiency, and pollution mitigation (UNEP, 2011). Scholars have examined green finance through various lenses, including institutional economics, policy analysis, and investment strategy. However, its integration with Islamic finance—rooted in *sharīʿah* principles—has received limited attention until recently. Islamic finance, governed by prohibitions on *ribā* (interest), *gharar* (excessive uncertainty), and *maysir* (speculation), is inherently inclined toward ethical and sustainable practices (Iqbal & Mirakhor, 2007, p. 82). Scholars such as Chapra (2000, p. 14) and Siddiqi (2006) argue that the foundational principles of Islamic economics—justice, equity, and sustainability—align well with the goals of green finance.

Key theoretical frameworks such as *maqāṣid al-sharīʿah* offer a moral-legal structure that prioritizes the preservation of life, wealth, intellect, and the environment (Kamali, 2008, p. 215). This framework has been increasingly applied to contemporary financial and environmental challenges, offering a normative basis for integrating Islamic principles into sustainability strategies. In the context of renewable energy, *sukuk* structures and equity-based financing mechanisms like *mushārakah* and *muḍārabah* have been posited as potential tools for mobilizing investment in clean energy (El-Gamal, 2006, p. 131). Nonetheless, scholars caution that practical implementation remains hindered by institutional inertia, regulatory heterogeneity, and limited investor awareness (Ariff & Iqbal, 2001, p. 47).

Despite a growing corpus of literature on green finance and Islamic finance separately, their intersection remains underdeveloped. Previous studies have often focused on theoretical compatibility or case-specific evaluations without offering systemic or scalable models (Obaidullah, 2005, p. 99). Furthermore, empirical data on the actual deployment of Islamic green finance instruments in OIC countries is scarce, limiting broader generalizations. This research aims to fill that gap by offering a conceptual synthesis of Islamic green finance within the renewable energy sector in OIC countries, backed by both theoretical insights and policy-oriented analysis.

Theoretical Framework

1. *Maqāṣid al-Sharīʻah* and Sustainable Development

The theory of *maqāṣid al-sharīʻah*—the higher objectives of Islamic law—serves as a foundational framework for aligning Islamic finance with sustainability. Traditionally, this theory identifies five essential goals: the preservation of religion, life, intellect, lineage, and wealth (Kamali, 2008, p. 157). Contemporary scholars have expanded these objectives to include environmental preservation, arguing that safeguarding the earth is integral to protecting life and wealth (Chapra, 2000, p. 21). This extension renders *maqāṣid al-sharīʻah* highly relevant to green finance, particularly in renewable energy financing, where ecological impact and intergenerational equity are central concerns. In this view, green investment is not only permissible but necessary to fulfill Islamic legal and ethical mandates.

2. Islamic Ethical Finance: Risk-Sharing and Asset-Backing

Islamic finance diverges from conventional finance by promoting risk-sharing contracts such as *muḍārabah* and *mushārakah*, which are inherently more aligned with real economic activity and less speculative (Iqbal & Mirakhor, 2007, p. 104). These contracts ensure that financial resources are directed toward productive assets, which aligns with environmental goals. For instance, *mushārakah*-based renewable energy ventures promote collaborative investment in solar or wind infrastructure, facilitating community engagement and long-term sustainability. The emphasis on asset-backed finance ensures that funds are linked to tangible, socially useful projects, enhancing transparency and reducing the potential for financial instability (El-Gamal, 2006, p. 114).

3. Institutional Theory and Regulatory Fit in Islamic Green Finance

Institutional theory explains how formal and informal structures—such as laws, norms, and cultural expectations—shape the implementation of new financial models. In the case of Islamic green finance, the lack of harmonized *sharīʻah* standards across OIC countries creates regulatory misalignment and market fragmentation (Ariff & Iqbal, 2001, p. 71). This lack of standardization affects investor confidence and cross-border transaction flows. Institutional theory thus provides a useful lens for understanding why, despite conceptual alignment, Islamic green finance remains underdeveloped in practice. Regulatory innovations, such as the establishment of central *sharīʻah* boards and regional green finance taxonomies, are critical to resolving these inefficiencies.

4. Stakeholder Theory and Islamic Social Responsibility

Stakeholder theory, which advocates for the inclusion of all affected parties in decision-making processes, complements Islamic finance's ethical imperative to promote social justice. In Islamic contexts, the inclusion of *ummah*-based priorities—such as communal welfare, poverty alleviation, and environmental stewardship—is vital (Siddiqi, 2006). Financial models that incorporate stakeholder concerns are more likely to succeed in addressing both economic and social sustainability. In renewable energy financing, this may involve participatory models where communities co-invest in or benefit directly from solar or wind projects, reinforcing the Islamic concept of *maslahah 'āmmah* (public interest).

Previous Research

1. Chapra (2000)

Chapra's seminal work, *The Future of Economics: An Islamic Perspective*, laid the philosophical groundwork for integrating Islamic values into economic theory. Using a normative and conceptual methodology, the book emphasized ethical development, environmental care, and socio-economic justice (Chapra, 2000, p. 91). Although it did not directly address green finance, the theoretical underpinnings of *maqāṣid al-sharī'ah* provided a crucial framework for future explorations of sustainability in Islamic finance. This study is foundational, though largely conceptual, highlighting the need for applied models.

2. El-Gamal (2006)

In *Islamic Finance: Law, Economics, and Practice*, El-Gamal (2006, p. 143) examined Islamic financial instruments, including *sukuk*, within legal and economic contexts. The book emphasized structural and regulatory challenges in scaling Islamic finance globally. While it only tangentially engaged with environmental themes, El-Gamal's legal-economic analysis is critical in understanding the operational bottlenecks in Islamic green finance. This study informs the regulatory and institutional challenges discussed in our research.

3. Obaidullah (2005)

Obaidullah's research introduced the idea of Islamic microfinance and its potential to support sustainable livelihoods (Obaidullah, 2005, p. 119). Through case studies and theoretical analysis, the study demonstrated how Islamic finance could promote poverty alleviation through ethical investment. Though focused on microfinance, its relevance to renewable energy lies in its exploration of bottom-up financing structures,

which could be repurposed for decentralized energy systems. It highlights the role of financial inclusion in sustainability.

4. Iqbal & Mirakhor (2007)

Their book, *An Introduction to Islamic Finance: Theory and Practice*, integrated Islamic finance principles with development economics (Iqbal & Mirakhor, 2007, p. 117). Using a macroeconomic framework, it advocated for risk-sharing contracts and asset-backed investments as tools for ethical economic growth. The work underlines the structural compatibility between Islamic finance and environmental sustainability, though it did not specifically address renewable energy, illustrating the need for sector-specific exploration.

5. Kamali (2008)

Kamali expanded the scope of *maqāṣid al-sharī'ah* to modern governance and environmental protection in *Shariah Law: An Introduction* (Kamali, 2008, p. 193). His study highlighted the flexibility of Islamic jurisprudence in accommodating contemporary ethical concerns, including ecological integrity. This work bridges classical Islamic law and modern environmental ethics, supporting the conceptual backbone of Islamic green finance proposed in this article.

6. UNEP (2011)

The United Nations Environment Programme published a landmark report titled *Towards a Green Economy*, identifying Islamic finance as a potential enabler of sustainable investment (UNEP, 2011). Using global data and policy analysis, the report suggested that *sukuk* and ethical investment funds could mobilize large-scale financing for green infrastructure. This was one of the first global reports to explicitly mention Islamic green finance, providing institutional legitimacy to the field.

These studies demonstrate the evolution of thought linking Islamic finance and sustainable development. However, they often lack specificity in applying Islamic financial instruments to renewable energy, particularly within OIC countries. Most studies are either conceptual or address isolated instruments without proposing systemic frameworks. The present research fills this gap by offering an integrated, context-specific model for Islamic green finance in the renewable energy sector of OIC countries.

Research Methods

This study adopts a conceptual, qualitative methodology grounded in document-based sources, including academic books, peer-reviewed journal articles, and institutional reports published no later than 2011. Rather than collecting primary data, the research synthesizes existing literature to develop a theoretical model for Islamic green finance in the renewable energy sector. The selection of conceptual methodology aligns with the exploratory nature of the research questions, which seek to understand structural, legal, and ethical dimensions rather than statistical trends.

The data sources used for this study include international peer-reviewed journal articles from major databases such as Scopus and Web of Science, as well as authoritative books on Islamic economics, green finance, and environmental policy. Priority was given to sources written in English or Arabic and published by international academic publishers or reputable institutions. To ensure relevance and credibility, Indonesian-language or non-peer-reviewed materials were excluded unless published in indexed platforms equivalent to Sinta-2 or above.

The primary technique for data collection involved thematic content analysis of textual materials. Texts were analyzed to identify recurring themes such as *maqāṣid al-sharī'ah*, risk-sharing instruments, and regulatory barriers to implementation. These themes were then categorized according to their relevance to each research question. The use of content analysis allows for both descriptive understanding and theoretical abstraction, enabling the synthesis of broad literatures across multiple disciplines.

Analytical methods were grounded in interpretive synthesis, a qualitative research approach that facilitates the development of conceptual frameworks based on existing literature. By comparing and contrasting scholarly perspectives, the study constructed a thematic matrix linking Islamic financial principles with sustainable development goals. This matrix served as the analytical foundation for proposing institutional and financial reforms within OIC contexts. The use of interpretive synthesis is particularly suitable for under-researched topics where empirical data is fragmented or unavailable.

Conclusions were drawn through triangulation of the identified themes and theoretical models. By integrating insights from Islamic legal theory, environmental economics, and institutional analysis, the study derived actionable recommendations for policymakers and financial institutions. The research does not claim empirical generalizability but aims to offer a robust conceptual foundation that can guide future empirical studies, policy formulation, and institutional innovation in Islamic green finance.

Results and Discussion

This research responds to a pressing question: how can Islamic financial principles be leveraged to support renewable energy financing in OIC countries? The importance of this question is underscored by the twin challenges of climate vulnerability and financing gaps that characterize many member states of the Organization of Islamic Cooperation. As global transitions to green energy accelerate, OIC countries must identify culturally and legally appropriate financial pathways that align with *sharī'ah* principles while meeting sustainability goals. Conventional green finance models—often rooted in interest-based lending and speculative markets—are misaligned with Islamic ethics, making it imperative to develop indigenous frameworks rooted in Islamic law and social responsibility.

The study reveals that Islamic finance, when guided by *maqāṣid al-sharī'ah* and operationalized through risk-sharing and asset-backed mechanisms, offers a highly compatible platform for green finance. However, implementation across OIC nations is uneven due to diverse regulatory environments, fragmented *sharī'ah* interpretations, and low institutional capacity. Instruments such as green *sukuk* and *mushārakah*-based renewable energy partnerships remain underutilized, despite their conceptual alignment with sustainability goals. Addressing these structural barriers requires coordinated policy reforms, harmonized regulatory standards, and strategic partnerships across the Islamic world. The subsequent thematic discussions will explore these findings in relation to the three central research questions, offering conceptual clarity and practical pathways for reform.

Research Question 1: How can Islamic financial principles support green finance initiatives in OIC countries?

1. Alignment of *Sharī'ah* Principles with Green Objectives

Islamic finance's ethical foundation provides an ideal match for the principles of green finance, as both prioritize long-term welfare, sustainability, and social justice. At the core of Islamic finance lies the principle of *maqāṣid al-sharī'ah*, which emphasizes the preservation of life, wealth, and the environment. These objectives align closely with global goals for sustainable development (Kamali, 2008, p. 213). Additionally, risk-sharing instruments such as *mushārakah* and *muḍārabah* discourage speculative behaviors, thereby fostering responsible investment in environmentally beneficial sectors. This alignment suggests that Islamic finance is not only compatible with green objectives but may also enhance their legitimacy in Muslim-majority contexts.

Literature supports this alignment by highlighting that Islamic finance avoids *ribā*, *gharar*, and *maysir*, reducing systemic financial risks while promoting ethical asset

allocation (Iqbal & Mirakhor, 2007). Scholars have posited that Islamic financial models can serve as a counterbalance to unsustainable debt-based systems (Chapra, 2000, p. 63). However, few studies have moved beyond theoretical alignment to propose integrated implementation models. This gap signals the need for context-specific adaptations that reconcile *sharīʿah* compliance with modern regulatory environments. The adoption of green *sukuk* by Malaysia and Indonesia represents early attempts to operationalize this potential.

Practically, leveraging Islamic principles for green finance in OIC countries requires institutionalization. Regulatory authorities and *sharīʿah* boards must develop consensus-based guidelines that recognize environmental sustainability as a component of Islamic social responsibility (*masʿūliyyah ijtimāʿiyyah*). Embedding green criteria within Islamic financial certification processes could enhance market uptake. Additionally, educational campaigns targeting investors and financial professionals are essential to raise awareness about the dual ethical and environmental merits of Islamic green finance.

2. Role of Asset-Backed Instruments in Green Investment

Islamic finance mandates asset-backing in all financial transactions, ensuring that capital is tied to real economic activity. This condition provides a natural fit for financing renewable energy infrastructure, which typically involves tangible, capital-intensive assets such as solar farms, wind turbines, and hydroelectric plants (El-Gamal, 2006, p. 121). Asset-backed instruments such as *ijārah sukuk* and *istisnāʿ contracts* offer flexible, *sharīʿah*-compliant options to structure green investments while providing stable returns to investors.

Critics argue that despite the theoretical potential, the application of such instruments remains limited due to regulatory ambiguity and the lack of green certification standards (Ariff & Iqbal, 2001, p. 84). Moreover, institutional investors often lack familiarity with Islamic contract structures, reducing their willingness to participate. Addressing these limitations requires collaboration between Islamic finance experts, environmental scientists, and policy regulators to standardize green asset classification under Islamic jurisprudence. The challenge lies not in the absence of instruments but in the absence of operational clarity and legal harmonization.

In practical terms, OIC countries can prioritize infrastructure-linked *sukuk* as flagship projects to test and promote Islamic green financing. National development banks and multilateral institutions such as the Islamic Development Bank can play catalytic roles by issuing and guaranteeing green *sukuk*, thereby reducing investor risk and fostering trust. Such instruments should include performance metrics linked to environmental impact, ensuring that financial returns correspond to ecological benefits.

3. Application of *Maqāṣid al-Sharī'ah* in Investment Evaluation

Applying *maqāṣid al-sharī'ah* as a framework for investment evaluation represents a transformative approach to aligning finance with Islamic ethical mandates. Traditionally used in jurisprudence, *maqāṣid al-sharī'ah* can be adapted as a strategic lens to assess whether a financial project promotes public interest (*maṣlaḥah 'āmmah*), environmental balance (*mizān*), and social welfare (*falāḥ*). This approach reframes profitability to include non-financial metrics such as environmental integrity and social equity.

Recent academic works advocate for developing Islamic ESG (Environmental, Social, and Governance) metrics based on *maqāṣid al-sharī'ah*, enabling faith-aligned impact investing (Siddiqi, 2006). Unlike conventional ESG metrics, which may lack theological grounding, an Islamic impact assessment could integrate religious obligations with global sustainability norms. However, operationalizing this vision requires rigorous standard-setting and multi-stakeholder collaboration to translate philosophical principles into measurable indicators.

OIC countries should develop investment evaluation frameworks that prioritize projects fulfilling *maqāṣid al-sharī'ah* alongside financial returns. Financial institutions can integrate these indicators into internal risk assessments and investor reports. Regulatory authorities should incentivize this approach by offering preferential treatment to projects that demonstrate high *maqāṣid*-compliance. Doing so will institutionalize ethics within finance and embed environmental and social accountability at the core of Islamic green investment.

Research Question 2: What Are the Specific Contributions of Islamic Financial Instruments to MDG Targets?

1.1 Zakāt-Based Health and Education Funding

Zakāt funds, when systematically collected and professionally managed, have the potential to finance vital social sectors such as primary healthcare, basic education, and scholarship programs—areas directly linked to multiple MDG targets, including the reduction of child mortality, improvement of maternal health, and universal access to education. In several Muslim-majority countries, notably Malaysia and the Gulf Cooperation Council (GCC) states, institutionalized *zakāt* agencies have begun to allocate a portion of their collected funds toward the construction of health clinics, school facilities, and tuition assistance for low-income families (Obaidullah & Khan, 2008). These initiatives illustrate how obligatory religious giving, when integrated into

a national development strategy, can act as a sustainable domestic financing source for essential services.

Studies also indicate that earmarking *zakāt* for specific developmental sectors enhances institutional transparency and builds greater donor confidence, thereby encouraging more consistent contributions from eligible payers (Cizakca, 2004). Clear sectoral targeting, combined with robust reporting mechanisms, not only improves accountability but also aligns religious obligations with national policy goals. However, there is growing concern among scholars and policymakers about the risks of overreliance on religious charity mechanisms to fulfill what are fundamentally state responsibilities. Critics warn that such trends may enable governments to retreat from their obligations to fund public services, particularly in underdeveloped or remote areas, thus potentially undermining long-term structural reform and equity in public service delivery.

In Indonesia, the national zakat agency—*Badan Amil Zakat Nasional* (BAZNAS)—is strategically positioned to expand its role in financing MDG-related programs. With improved governance structures, standardized disbursement criteria, and better coordination with local development plans, BAZNAS can become a powerful institutional bridge between faith-based obligations and state development agendas. Developing targeted funding streams for health and education, alongside performance-based evaluations, would allow zakat to support Indonesia's pursuit of the MDGs in a manner that is both ethically grounded and administratively effective. Enhancing digital transparency and linking disbursements to measurable outcomes will further increase the developmental impact and credibility of zakat-based social spending.

1.2 Waqf for Infrastructure and Social Services

Waqf, or perpetual endowments, historically played a foundational role in Islamic civilization's provision of social services, including hospitals, schools, irrigation systems, and even roads and bridges (Cizakca, 2004). As a non-extractive, long-term funding mechanism, *waqf* has the potential to finance critical infrastructure in ways that align with sustainable development and intergenerational equity. The perpetual nature of *waqf* ensures that once endowed, the principal remains intact while only the returns are utilized, making it a suitable mechanism for supporting capital-intensive, long-horizon development assets that correspond to MDG priorities such as clean water, rural electrification, and healthcare access.

Despite its historical significance, *waqf* remains underutilized in most contemporary Muslim societies due to outdated legal frameworks, poor institutional governance, and lack of asset mobilization strategies. Recent literature has called for the legal modernization and financial securitization of *waqf* properties to unlock dormant assets and convert them into productive development capital (Chapra, 2000). Proposed

reforms include digitizing land registries, creating *waqf* investment funds, and partnering with public-private initiatives to deploy *waqf* endowments toward MDG-aligned infrastructure. In many cases, *waqf* land remains idle or mismanaged due to weak oversight and bureaucratic inefficiencies, preventing it from contributing meaningfully to national development agendas.

Indonesia's recent legislative reforms on *waqf* offer a timely window of opportunity for institutional revitalization. With a significant amount of *waqf* land recorded across the archipelago, the country has a unique advantage in deploying these assets to support rural electrification, clean water provision, and primary healthcare facilities—critical sectors that intersect directly with several MDG indicators. By integrating *waqf* administration into regional development planning and strengthening the governance capacity of the *Badan Wakaf Indonesia* (BWI), the government can transform religious endowments into strategic, faith-aligned assets for long-term development. Cross-sector partnerships between Islamic finance institutions, municipal governments, and NGOs could further enhance the mobilization and effective deployment of *waqf* for MDG-oriented social infrastructure.

1.3 Profit-Sharing Investment for Employment

Profit-sharing contracts such as *muḍārabah* (trust-based investment partnerships) and *mushārakah* (joint ventures) represent key instruments in Islamic finance that are inherently suited for promoting entrepreneurship and employment generation. These financing models offer an ethical, non-collateralized alternative to debt financing, making them ideal for small and medium enterprises (SMEs), especially in sectors where access to credit is limited. Because these contracts distribute both profits and risks between financiers and entrepreneurs, they foster mutual accountability and sustainable business growth—attributes that align with MDG goals promoting decent work and inclusive economic growth (Iqbal & Mirakhor, 2007). Furthermore, by avoiding the fixed-interest obligations characteristic of conventional loans, profit-sharing mechanisms reduce the likelihood of debt traps and financial distress among emerging entrepreneurs.

Empirical studies have shown that when appropriately structured and supervised, *muḍārabah* and *mushārakah* arrangements can improve credit quality, reduce moral hazard, and cultivate trust between Islamic financial institutions and their clients (Khan & Bhatti, 2008). These outcomes are particularly important in contexts like Indonesia, where informal economic activity dominates and where trust in financial intermediaries may be limited. However, implementing profit-sharing contracts at scale is not without challenges. The need for rigorous due diligence, continuous monitoring, and dispute resolution mechanisms increases transaction costs and administrative burdens. Moreover, asymmetric information and underdeveloped legal enforcement mechanisms often deter financial institutions from fully embracing these instruments, thereby limiting their application and impact on employment generation.

To enhance the developmental utility of profit-sharing schemes in Indonesia, policymakers should consider incentivizing Islamic banks to offer tailored *muḍārabah* products linked to key MDG sectors such as agriculture, fisheries, renewable energy, and rural industries. These sectors not only hold substantial employment potential but also align with Indonesia's broader development priorities. Establishing guarantee schemes, offering tax incentives, and integrating Islamic venture capital initiatives could further encourage financial institutions to participate. Additionally, embedding technical assistance and financial literacy programs within these financing models would enhance entrepreneur readiness and ensure more sustainable project outcomes. In this way, Islamic profit-sharing contracts can evolve from theoretical ideals into practical engines of inclusive development and MDG realization.

Research Question 3: What models and instruments are most effective for scaling Islamic green finance in OIC nations?

3.1 Green Sukuk as a Scalable Financing Instrument

Green *sukuk* have emerged as flagship instruments capable of mobilizing large-scale capital for renewable energy projects in a *sharī'ah*-compliant manner. These Islamic bonds link proceeds directly to environmentally sustainable projects, combining asset-backing with environmental accountability. Countries like Malaysia have successfully issued sovereign and corporate green *sukuk*, demonstrating their scalability and investor appeal (UNEP, 2011). Structurally, green *sukuk* can be modeled as *ijārah*, *wakālah*, or *istisnā'* contracts, depending on the project's nature.

While their potential is clear, their widespread adoption is hindered by a lack of harmonized guidelines and investor familiarity. Literature points out that inadequate third-party verification systems and vague definitions of "green" create barriers to trust and adoption (Ariff & Iqbal, 2001, p. 118). Furthermore, most green *sukuk* remain concentrated in a few countries, with minimal uptake in Sub-Saharan or Central Asian OIC members, limiting impact at the bloc level.

To scale green *sukuk* issuance, OIC governments must support market infrastructure development and provide fiscal incentives such as tax exemptions and risk guarantees. Partnerships with multilateral institutions like the Islamic Development Bank can provide technical assistance and de-risking mechanisms. Additionally, sovereign wealth funds in oil-rich OIC countries could be mandated to allocate portions of their portfolios to green *sukuk*, catalyzing market growth.

3.2 Public-Private Partnerships in Renewable Energy Investment

Public-private partnerships (PPPs) offer a powerful model for expanding Islamic green finance, especially in large-scale renewable energy projects requiring long-term investment. Structuring PPPs under *mushārakah* or *muḍārabah* frameworks ensures equitable risk-sharing while aligning public goals with private expertise. These partnerships can facilitate investment in solar grids, bioenergy systems, or hydropower plants across OIC nations.

However, the literature suggests that many PPPs in OIC countries suffer from weak legal enforcement, misaligned incentives, and bureaucratic hurdles (Iqbal & Mirakhor, 2007). Moreover, Islamic financial institutions often lack experience in structuring such complex deals. The absence of standardized contract templates and regulatory clarity further disincentivizes private sector participation in green PPPs.

Scaling Islamic green PPPs requires the development of legal frameworks that clarify roles, responsibilities, and *sharī'ah*-compliant profit-sharing mechanisms. Governments should establish PPP units with specialized Islamic finance teams and streamline approval processes for green infrastructure. Additionally, risk mitigation tools such as *takāful* insurance and *wakālah*-based guarantees can reduce investment uncertainty and attract private capital.

3.3 Green Islamic Microfinance for Energy Access

In many OIC countries, especially in rural and underdeveloped regions, large-scale renewable energy infrastructure is either infeasible or prohibitively expensive. In such contexts, green Islamic microfinance offers a scalable alternative for promoting decentralized energy access. By combining principles of financial inclusion with environmental sustainability, microfinance institutions can fund solar home systems, clean cookstoves, and mini-grid installations using *qard al-ḥasan* (benevolent loans) or *muḍārabah* contracts.

Research by Obaidullah (2005, p. 102) has demonstrated the effectiveness of Islamic microfinance in empowering low-income households through ethical lending. However, most existing microfinance models do not integrate environmental objectives, missing the opportunity to leverage their networks for green impact. In addition, a lack of technical expertise and limited donor funding constrain the scope of such programs.

To scale green Islamic microfinance, financial institutions should develop specialized products that include environmental criteria in loan approval processes. Partnerships with NGOs and renewable energy providers can offer technical support and ensure that financing translates into measurable environmental benefits. Donor-backed revolving funds or *zakāt*-linked programs could further enhance financial sustainability and outreach in low-income communities.

Core Findings and Pathways Forward

The study has revealed that Islamic financial principles—particularly those rooted in *maqāṣid al-sharīʿah*, asset-backed instruments, and risk-sharing models—offer a conceptually robust and ethically aligned framework for financing renewable energy in OIC countries. This alignment is not only theoretical but also functional, as evidenced by emerging instruments such as green *sukuk* and *mushārakah*-based renewable partnerships. By analyzing the synergies between Islamic ethical mandates and environmental sustainability, the study contributes a novel perspective to the discourse on green finance, emphasizing that faith-based finance can play a transformative role in sustainable development.

Theoretically, the research underscores the importance of integrating Islamic jurisprudence with modern sustainability frameworks, suggesting that *sharīʿah* compliance and environmental impact assessment can coexist within a unified financial strategy. Practically, it identifies critical structural barriers—regulatory fragmentation, limited green finance literacy, and weak market infrastructure—as impediments to scaling Islamic green finance. Addressing these challenges requires systemic reforms that harmonize regulatory standards, promote capacity building, and facilitate cross-border investment in green *sharīʿah*-compliant instruments. Through this integrated approach, Islamic green finance can be positioned not only as a parallel system but as a catalyst for inclusive and sustainable economic transformation across the OIC region.

Conclusion

This study has synthesized conceptual, legal, and operational dimensions of Islamic green finance, offering a multidimensional framework for renewable energy financing in OIC countries. It has demonstrated that the ethical imperatives of Islamic finance—embodied in principles such as *maqāṣid al-sharīʿah*, risk-sharing, and asset-backing—are naturally compatible with the objectives of sustainable development. By integrating these principles with financial and regulatory innovations, Islamic green finance can effectively mobilize capital toward environmentally responsible projects.

The research also highlights the urgent need for institutional reforms, knowledge integration, and standardized frameworks to overcome existing implementation barriers. As OIC countries strive to meet global sustainability goals, embracing Islamic

green finance offers a culturally relevant and ethically grounded pathway. Future research should explore empirical validations of the proposed models and assess their impact across diverse socioeconomic contexts. Practitioners and policymakers are encouraged to institutionalize Islamic green finance through cross-sectoral collaboration, thus advancing both environmental stewardship and financial inclusion.

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