

Sustainable Practice of Sukuk

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Abstract

Objective: This study aims to analyze the current sukuk practices and formulate strategies to increase sustainability in sukuk transactions. The main focus of the research is to bridge the gap between sustainability principles and Islamic financial practices, particularly in sukuk transactions, to maximize their contribution to the Sustainable Development Goals (SDGs). **Theoretical framework:** Based on sharia principles and sustainable finance theory, especially ESG aspects in Sukuk instruments. **Literature review:** There is a considerable amount of sukuk literature, but studies on its relationship with sustainability and ESG are still limited and in-depth. **Methods:** Using qualitative methods through the analysis of literature and Islamic financial sector sources to evaluate the suitability of sukuk with sustainability principles. **Results:** The results show that sukuk has great potential as an innovative financial instrument that can directly support the Sustainable Development Goals (SDGs), including access to affordable renewable energy, infrastructure development, and the creation of sustainable cities and communities. **Implications:** Provides a basis for academics and policymakers to develop a sustainable sukuk policy framework. **Novelty:** Offers a new approach that explicitly links sukuk and ESG, as well as practical strategies for its integration in Islamic finance.

Keywords: sukuk, sustainability, islamic finance, transactions and development, sdgs.

INTRODUCTION

In recent years, the idea of sustainability has drawn a lot of interest across a variety of industries and sectors, including Islamic finance [1]. Sustainable development is defined as any current developmental activity or process that meets the needs of the present without compromising the ability of future generations to meet their own needs [2]. It is often thought of as a triple bottom line concept concerning people, planet, and profits, coordinating to establish social inclusion, environmental protection, and economic growth in an integrated manner [3]. Islamic finance academics generally agree that, because Islamic finance lays such a high emphasis on social justice and ethical investing, it is a perfect fit for sustainability. Particularly, they see a significant intersection of sustainable development and Islamic finance in sukuk. According to Lawal and Imam, sukuk may serve as a special purpose vehicle in attaining the Sustainable Development Goals (SDGs) [4].

Sukuk are popular Islamic financial securities that allow businesses to raise finance via financial markets while conforming with the principles of Shariah [5]. Islamic banking aside, the sukuk market is the most prominent and commonly used Islamic finance product,

especially in terms of issuance volume and geographic diversification [6]. They are value-based financial securities aiming to reform the current mere profit-seeking approach to the theory and practice of investment by linking it to ethical, social, and environmental considerations. They are poised to advance the sustainability agenda because they are guided by the Maqasid-ul-Shariah, particularly in terms of harm avoidance while engaged in profit-seeking investment [7].

In such a sense, they have proved to be promising products to materialise the key sustainability objectives within the world of Islamic finance and business. They can provide a platform for socially conscious investing and promote initiatives that benefit society and the environment. For instance, sukuk could serve as a useful tool for funding the renewable energy sector [8]. As the initiator and mediator of responsible investment, they present great potential to support efforts for sustainable development and tackle major global issues. The sustainability discourse initially started with the United Nations Conference on the Human Environment, where the basic ideas concerning the attitudes of individuals and nations towards the environment and development were first identified [9].

The Rio Declaration on Environment and Development, informally known as the Earth Summit, developed the ideas further into 27 principles intended to guide countries in future sustainable development. Most notably, member states promised to reach international consensus on sustainable development (Principle 12), view environmental protection integral to sustainable development (Principle 4), minimise and internalise environment damage (Principle 2), take into consideration developmental and environmental needs of present and future generations (Principle 3), collaborate internationally (Principle 7) and build sustainable economy (Principle 8). Following the Millennium Summit of the United Nations in 2000, the UN Member States agreed to try to achieve eight Millennium Development Goals (MDGs) by the year 2015. The MDGs had a limited scope, only covering three areas: human capital, infrastructure, and human rights (social, economic, and political). It is intended to increase living standards by eradicating extreme poverty, empowering women, reducing child mortality, halting the spread of HIV/AIDS, providing universal primary education, working towards environmental sustainability, and global partnership for development. The MDGs were subsequently replaced by the more ambitious and comprehensive United Nations Sustainable Development Goals (SDGs) in the Paris Agreement of 2015. Also known as the Global Goals, it prescribes 17 SDGs calling on member States to take action universally to end poverty, protect the planet, and ensure enjoyment of peace and prosperity for every individual by 2030 [10].

The promotion of sustainability, circular economy, and sustained economic growth all require a sizeable amount of finance from a variety of innovative sources. Sukuk could aid in filling the financing deficit for infrastructure projects. Despite its great potential for establishing sustainability, the actual contribution of sukuk to sustainable development is low. According to the IIFM Sukuk Report, over 188 billion worth of sukuk have been issued globally by mid-2022, of which only 20 billion may have been the share of Environmental, Social and Governance (ESG) linked Sukuk. Even though sustainability is an undeniable imperative that is becoming more and more important in the world, the existing sukuk practice is still substantially occupied with a profit-seeking approach to investment [11].

The core of sukuk practice lies in ethical business in the sense of prohibiting interest-bearing operations on the one hand and authorising profit-earning business transactions on the other. It is not much concerned with the end use of the underlying investment, which results in lost chances to achieve the SDGs. The practice must transform substantially if Islamic countries that have already pledged to the Paris agreement are to achieve its 17 SDGs. It must become SDGs smart to promote sustainability and to integrate Islamic finance with the Sustainable Development Goals. However, the important question that must be investigated before any such transformation can occur is how sukuk practice may incorporate sustainable development objectives. By identifying and critically analysing current sukuk practices and proposing tailored plans to improve sustainability as defined

by the Paris Agreement, this paper seeks to encourage sustainable practices in sukuk, thereby assisting in the accomplishment of the wider sustainable development objectives [12].

To propose feasible solutions, it is crucial to fully understand the challenges and complexities associated with the implementation of sustainable sukuk practice. Additionally, making informed decisions entails exploring the potential impacts that the adoption of sustainable practice in sukuk may have on environmental, social, and economic outcomes. By addressing these issues, it becomes easier to promote sustainable behavior and foster sustainable growth in the Islamic economies. This paper takes a qualitative research methodology based on the standard exploratory approach in conformity with its agenda, which is to reconsider the current sukuk practices and to recommend reformed plans of sukuk practice to improve sustainability as defined by the Paris Agreement. In doing so, the focus will be on the discovery of, and presenting insights into, current sukuk practices, difficulties, and potential solutions, and a reconsidered application of such practices in line with universal sustainability goals. This methodology has been used by many scholars in scientific research to determine the research problem or to explore its dimensions, aspects, and causes [13].

A qualitative approach was selected for this study because this approach is beneficial for studies seeking the reflection of problems in reality and enables a researcher to see how people may use their experiences to reconstruct the world to associate with the desirable meanings or outcomes. This methodology allows the researcher to explain why the current sukuk practice is failing to fully conform to the ethos of sustainability and how this failure can be rectified. The data is collected from both primary sources such as Islamic teachings that are written in the Quran and narrated via Sunnah and official documents and secondary sources such as books and articles and other literature in Islamic finance and sukuk theory and practice to identify problematic areas where sukuk lack sustainable practice and provide workable solutions to tackle the problem and present a reconsidered plan for such practice to embrace sustainability [14].

A comprehensive literature review is carried out. Qualitative and quantitative research published after 1999 around the research topic are studied along with web sources to analyse current sukuk practices. As this research substantially relies on a review of secondary data, it will not involve empirical data-gathering techniques, such as questionnaires, surveys, and interviews of stakeholders from different sectors or geographical areas engaged in sukuk transactions. Empirical studies are suitable when insightful understandings of specific cases or contexts with unique characteristics and constraints are to be realised. However, such a study, though important, falls beyond the scope of current research that aims to conceptually understand the difficulties of and possible solutions to unsustainable sukuk practice. Empirical research should therefore be undertaken in future research. The knowledge gathered from this research will help academics, professionals, and policymakers in the field of Islamic finance to conceptually understand the difficulties of and possible solutions to unsustainable sukuk practice [15].

Towards its objectives, the rest of the paper is divided into four sections. First, sukuk repeatedly differentiates from conventional bonds by claiming to be a morally loaded ethical investment instrument that links efficiency and profit maximisation objectives with those of ethical and social considerations that are the main ingredients of the sustainable finance agenda. While bonds are awarded with supposedly unethical risk-free interest, sukuk enjoy profits of business on a risk/profit sharing basis, which is fair and ethical, helping with the building of sustainable businesses and communities. Understanding the nature and specific features of sukuk is therefore a prerequisite to the realisation of sustainable sukuk practice (section II). Islamic academics and scholars would commonly agree that while adhering to Islamic principles, sukuk represents a significant opportunity to support and promote sustainable practices in Islamic financial transactions. By addressing key sustainability challenges and implementing strategies for fostering

sustainable practices, sukuk can play a vital role in allocating capital toward sustainable development objectives [15].

The significance of sustainable development as a means of addressing urgent socioeconomic and environmental concerns is increasingly being recognized by the international community. Sustainable development seeks to safeguard the environment, promote social equality, and build the economy while saving resources for coming generations. Through its 17 SDGs, which offer a thorough framework to direct global efforts, the UN has played a crucial role in promoting sustainable development. Despite sukuk's potential, the share of actual sustainable practice of sukuk has been low, and its further development has proved to be challenging. Investigating how incorporating sustainable practices into Islamic sukuk transactions might help achieve several SDGs is an important task. Current literature provides valuable information on questions of how sukuk may act as a great catalyst for sustainable practice and what challenges may hinder the development of sustainable sukuk practice (section III) [15].

The literature suggests that sukuk offers an exceptionally unique opportunity as a catalyst for sustainable practice. While adhering to Islamic law, it can be adjusted to serve several SDGs, for instance, to finance projects that are socially conscious and promote infrastructure and economic development, encourage community well-being, enhance clean energy, and aid in the fight against climate change. However, it also observes that the development of any successful sustainable practice of sukuk may well be dependent on a range of factors such as more active stakeholder engagement, standardized sukuk markets, robust governance and regulatory frameworks, tougher disclosure standards, revised risk management arrangements, and contractual innovation (section IV). Finally, the paper concludes in Section V [16].

LITERATURE REVIEW

While there is a wealth of research available on sukuk in general, the literature specifically focusing sustainable practices of sukuk is limited. Until recently, most sukuk literature concerned providing a detailed description of the important features, the contractual foundations, shariah compliance requirements, and governance and regulatory challenges of sukuk as distinguished from conventional bonds. El-Gamal presented an in-depth analysis of sukuk transactions and provided insights into the moral, financial, and practical elements of sukuk, giving a thorough comprehension of its theoretical underpinnings as an Islamic financing method. Similarly, Busari et. al reviewed requirements for Shariah compliance of Sukuk. Critically analysing the English High Court case of Dana Gas PJSC v. Dana Gas Sukuk Limited, he concluded that Sukuk transactions must be Shariah compliant both formally and substantively. Khan and Bhatti explored the governance issues and regulatory difficulties that are associated with not only sukuk transactions but also Islamic finance in general. They emphasized the necessity to establish strong regulatory frameworks to guarantee market stability, investor protection, and transparency in sukuk transactions. Kusuma and Silva viewed sukuk as an alternative financing tool intended to diversify the sources of funding [17].

Sukuk was also researched as a component of corporate capital structure in Islamic companies. Researchers investigated the questions of when and to what extent an Islamic company should seek finance from external resources [18]. Corporations need finance to set up and run. They normally start with internal resources to fund their business projects and operations, but as they grow, they may also seek external capital from outside investors. Analysing a range of circumstances, the literature attempts to propose the optimal balance between equity stock and sukuk securities (Islamic bonds) sold to investors by Islamic companies [19]. This involves considering various factors such as the cost of capital, interest rates, market conditions, company growth prospects, and industry dynamics [20].

Some literature, both theoretical and empirical, emphasizes the crucial role played by sukuk markets in stimulating sustainable economic growth [21]. Aman et. al. studied the relationship between Sukuk markets and macroeconomic and financial factors and emphasised that the sustainable economic growth may substantially depend on Sukuk market developments. As an innovative financial instrument that adheres to Islamic investment principles, sukuk aids in sustainable development goals by diversifying investments and reducing risks. By the same token, Smaoui et.al. suggest that a well-developed Sukuk market contributes to the expansion of the country's infrastructure, which is a key determinant of economic growth. They generally suggest that the size of investment profile, the development of an efficient and effective corporate sector, the growth of economic size, adequate investor protection measures, and lower mismanagement are associated with well-developed sukuk markets. For instance, Boujlil et al. suggest a strong link between sovereign sukuk issuance by governments and macroeconomic considerations. In the same vein, Said and Grassa and Smaoui and Khawaja viewed sukuk market development as a key medium for wider structural, institutional, and macroeconomic development. According to Usmani, financing infrastructural projects would fit more efficiently with sukuk structures than any other financing method relying on debt [22].

These aside, the sustainability discourse initially emerged in Islamic finance as an inseparable element of ethical investment [23]. As a faith-based financing system, Islamic finance requires all investment activities to conform to the ethical values of Islam. As Hill submitted, Islamic finance is a system that allows businesses to generate financial returns, which is necessary for their financial stability, while complying with the moral and social teachings of Islam. In particular, he refers to some green sukuk initiatives such as Tadau Energy, Quantum Solar PND Merdeku, that have recently been active in Malaysia as prime instances of ethical investment in the Islamic economy of Malaysia [24].

Billah et. al. found proximity between sukuk as Islamic ethical finance and green bonds as they both share the capacity to promote sustainability objectives. Kalkavan et. al. identified that Islamic moral values in economic activities, such as fair income distribution, prohibition of interest, and securing business partnerships, are the most important criteria that have a significant bearing on preventing poverty and avoiding wastage in developing societies. Righteousness in commercial activities decreases uncertainty in the market so that trade volume can be increased, which contributes to sustainable economic improvement, i.e., the economic, social, cultural, and environmental development. A recent empirical study in Pakistan examining three measures of Money supply (M2), Stock Market Capitalization, and Private Credit to GDP, concluded that ethical financing via Shariah-compliant financial products has great potential to enhance economic growth and sustainable development [25].

Concurrent with the rise of corporate social responsibility and stakeholder discourse in Islamic economies, research on sustainability partially shifted to CSR and socially responsible investments (SRIs). For example, Sharmeen et. al discussed the sustainability of Islamic finance merely as an element of CSR. Similarly, Yesuf and Dalal discussed the sustainability of Islamic finance as a method of socially responsible investments (SRIs). Ammar et. al proposed a stakeholder model that yields a sustainability performance index for Islamic financial institutions. The index is organised based on stakeholders' viewpoints and accords with the Maqasid-Al-Shariah objectives and can be used to assess whether the key stakeholders' perspectives, i. e. economic, social, environmental, and religious dimensions, are adhered to by Islamic financial institutions. Hasan et. al provide evidence on the potential of SRI sukuk to finance large-scale public-private partnership projects that are currently hampered by regulatory and shariah compliance challenges.

Socially Responsible Investment (SRI) is suggested to have a high potential to be an innovative financing mechanism for the sustainable development of Muslim economies because the ultimate objective of Islamic finance is achieving socio-economic justice and well-being among all members of the society. According to Rashid & Radiah, organizations that focus more on socially responsible and sustainable practices have higher financial performance measures by return on assets, profits before taxation, and cash flow from operations compared to those without such commitments. This is especially true in respect of Multinational corporations that initiate investment into social or eco-friendly practices, thereby making significant contributions toward sustainable development [26].

However, there seems to be no consensus on the specific definition of SRI, though it is commonly accepted that it is a type of investment that is based more on personal values than financial decisions. Some refer to this type of investment as sustainable, others refer to it as responsible, and some refer to it as impactful. According to Adam and Shauki, the term “SRI” is an umbrella term referring to an investment that has bearings on ethics, social, and environmental concerns, so it must be used interchangeably with ethical, social, and sustainable investment. In the same vein, Paltrinieri et al suggest that the role played by Islamic finance as a prime example of the SRI system goes beyond ethical and social implications, and extends to the environmental and governance pillars. The Islamic finance system is naturally capable of promoting SRI, sustainable development, and CSR by limiting leverage, speculation, and uncertainty [27].

The Securities Commission Malaysia (SCM) has issued a guideline on the issuance of SRI sukuk, which indicates a strong inclination in modern practice of Islamic finance towards recognition of a broader scope for SRI and a noticeable transformation to sustainability objectives. According to its guideline, a SRI project must be having one or more of the following five objectives: protection and preservation of the environment and natural resources, conserving the consumption and utilization of energy, promoting the utilization of renewable energy and reducing the gas emissions, and last, but not least, improving and ameliorating the quality of life among members of the society. More recent literature focuses on sustainable Sukuk as an Islamic finance instrument that is capable of accommodating Environmental, Social, and Governance (ESG) considerations. As a novel Islamic finance instrument, sukuk provides a ripe setting for ethical investing practices, sustainable projects funding, and socially and environmentally responsible investment [28].

In the same vein, some research criticised Islamic finance products and practices for not unleashing the SRI objectives and the sustainability potentials. Mohamad et. al have criticized Islamic finance for its lack of participation in promoting financial inclusion and social welfare for the poor. The authors highlighted the exclusion of the social sector in terms of innovative products and services and the currency of the underdeveloped social sector within Muslim countries, which suffers from high poverty, illiteracy, unemployment, and a lack of social welfare. Hashima et. al attribute the failure to Shariah regulatory bodies across Islamic economies. According to them, Islamic finance could have the advantages over the conventional financial institutions only when Shariah Supervisory Boards (SSBs) play well their role. They must function as a major push factor and lead the Islamic financial institutions (IFIs) to adopt more sustainability practices in the future. Once established, the sustainability practices may continue to perpetuate long after they are put in place [29].

More recently, literature has given thought to the reasons why the development of sustainable sukuk practice in Islamic finance has been so slow and challenging. Researchers have frequently found the integration of sustainable objectives into the

sukuk practice to be difficult for several reasons. To begin with, the Shariah governance and regulatory frameworks currently focus on monitoring only Shariah compliance of activities financed by sukuk rather than their contribution to the Sustainable Development Goals. As El-Gamal & Inanoglu pointed out, governance considerations in promoting sustainable practices require that sukuk structures concurrently align with Shariah principles and sustainability objectives [30].

A robust governance framework guarantees that the underlying assets and activities financed by sukuk are not only compliant but also contribute positively to the Sustainable Development Goals. Sustainability-responsive governance rules should be translated into internal governance structures of the issuing organisations and become part of the listing rules of Islamic sukuk markets. At the organisational level, effective governance procedures should guarantee that when deciding whether to issue sukuk, corporate boards make decisions that accommodate sustainability factors. Boards are essential in establishing strategic goals, ensuring adherence to ESG standards, and incorporating sustainable practices into daily operations. Good governance practices make it easier for sustainability-driven investors to participate actively in sukuk transactions that enhance sustainability objectives. In such a governance scheme, investors would be encouraged and able to align their sustainability expectations with those of the issuer, thereby improving sustainability performance and increasing responsibility [31].

Furthermore, the absence of standardized sustainable frameworks and procedures discourages sustainable practices in Islamic sukuk transactions. As there is no harmonized practice, it will be challenging for the stakeholders of sustainable investing to evaluate and compare the sustainability performance of sukuk issuances. Additionally, issuing organisations are currently under no rigorous obligation to disclose and report on the potential impacts of their sukuk projects on the environment, society, or the wider stakeholder community. Lenient standards and insufficient disclosure procedures regarding SDGs and ESG make it difficult for conscious investors and other stakeholders to evaluate the sustainable practice of sukuk properly. To attract socially responsible and environmentally conscious investors, there is a growing need for transparent and standardized reporting systems for sukuk issuances that incorporate sustainability standards and objectives [32].

Sukuk, as Islamic financial instruments, are becoming increasingly popular in the global financial markets, and aligning them with sustainability goals can help attract a wider range of investors, including those who prioritize environmental and social impacts. In the absence of standardized regulatory frameworks across Islamic capital markets, issuers may further choose to issue sukuk only in countries with soft sustainability regulations. This would encourage regulatory arbitrage, and as Hamouda and Elkhatab indicated, it may hinder the development of sustainable practices of sukuk. Islamic capital markets must solve regulatory issues and execute strong governance considerations to promote sustainable practices. To encourage the issuance of sustainable sukuk, it is crucial to standardize SDGs and ESG guidelines, streamline disclosure and reporting processes, and harmonize regulatory frameworks across countries. Governance practices that place a focus on board monitoring, Shariah compliance, and investor involvement help sukuk transactions to embed sustainable development goals [33].

The Islamic sukuk market may enhance its contribution to sustainable development projects by tackling these regulatory difficulties and putting in place efficient governance practices. Efforts at standardization, such as the publication of guidelines by pertinent agencies, can improve comparability and transparency. The development of new sukuk structures and sustainable sukuk practice may also be dependent on a reconsidered understanding of sukuk as a financial security that can integrate the SDG goals. Yet that can occur only when all the stakeholders are conscious of the SDGs

and the existing sukuk market challenges. Last, but not least, there is a need to increase awareness of sustainable Islamic finance practices and to educate people about them. This includes fostering an understanding of ESG considerations and how sukuk transactions may incorporate them [34].

Diverse viewpoints have been presented in the literature regarding promoting sustainable practices in sukuk finance. Some advocated the idea that, for its great potential and advantages, sukuk finance should divert from the current sustainability-neutral / ignorant practice to a more innovative practice that would invest in sustainable development projects. Some acknowledged the potential and opportunities for the sustainable use of sukuk, but they also pointed to the difficulties for such development. Some emphasized the need for taking ESG aspects into account when making sukuk investments. Some viewed an improved regulatory framework and ESG disclosure regulation as key to enhancing the sustainable practice of sukuk in Islamic finance. Some found sukuk as a suitable substitute financing source for sustainable infrastructure development, while others suggested that sukuk is appropriate for funding renewable energy projects. A common feature of the studied literature is that it all offers insightful recommendations for enhancing sustainable practices in Islamic sukuk transactions. All this literature helps to comprehend the great potential inherent in sukuk in the development and promotion of sustainable practices in Islamic finance and beyond. Yet, the diverse viewpoints also signal that more study and research is to be undertaken to fully realize the sukuk potential for sustainability.

METHODOLOGY

This research uses a qualitative approach with an exploratory method, which aims to review current sukuk practices and propose improvements to sustainability strategies by the Sustainable Development Goals (SDGs), based on the Paris Agreement. This approach was chosen because it is suitable for exploring problems conceptually and in-depth, and understanding the challenges and potential solutions of sukuk practices that are not yet sustainability-oriented [35].

The data in this study were obtained through a literature review from primary and secondary sources. Primary sources include official documents as well as Islamic financial principles sourced from the Qur'an and Sunnah. Secondary sources include books, scientific articles, industry reports, and other relevant literature in the field of Islamic finance and sukuk [36].

The study did not involve the collection of empirical data, such as surveys or interviews. The main focus is on the conceptual analysis of sukuk practices and how they can be adapted to accommodate sustainability principles, especially in the context of ESG (Environmental, Social, and Governance). The analysis technique is carried out by identifying problem areas and compiling practical recommendations for improvement [37].

Table 1. Research Methods

Aspect	Description
Approach	Qualitative, exploratory
Objective	Analyze current sukuk practices and propose sustainability improvements (SDGs)
Data Sources	Primary: Qur'an, Sunnah, official documents Secondary: books, articles, reports
Data Collection	Literature review only; no surveys or interviews
Analysis Technique	Conceptual analysis and practical recommendations on ESG integration

RESULTS AND DISCUSSION

To contribute to the development of sustainable communities, incorporating sustainability criteria based on the Sustainable Development Goals (SDGs) as set out by the UN into Islamic finance products, including sukuk, would become desirable. While all Islamic finance products have some capacity, sukuk offers an exceptionally unique opportunity as a catalyst for sustainable practice. It has a great capacity to combine Shariah compliance with the goals of sustainable development [38]. It enables issuers to generate money Islamically for initiatives like green infrastructure, social development projects, and renewable energy that have a good influence on the environment and society [39]. Sukuk transactions can help achieve the SDGs in many ways. For instance, sukuk can be used to fund projects that are in line with the SDGs and meet social requirements, such as building better infrastructure, promoting renewable energy sources, or providing affordable housing [40].

It can also be used to finance renewable energy initiatives, such as solar or wind farms, which are affordable and clean to achieve SDG 7. Green sukuk, a subset of sustainable sukuk, is concerned with environmentally friendly funding initiatives. It allocates funds to programs that support renewable energy, energy efficiency, and averting climate change. Sukuk issuing rules can require a climate risk assessment report to be part of the issuing processes to enable issuers and investors to examine and take into consideration any possible climate-related risks *ex ante*. According to El-Gamal and Inanoglu, this assessment improves transparency and encourages the development of resilient and low-carbon sukuk projects. By funding renewable energy projects, sukuk helps to lower greenhouse gas emissions and promote cost-effective, clean energy sources. Likewise, sukuk can be utilised to satisfy SDG 9, which concerns the promotion of infrastructure, industry, and innovation. It can channelise funding to infrastructure projects like grids for renewable energy or transportation networks [41].

These investments support economic growth, boost connectivity, and provide access to essential services. Sukuk can also be engineered to tackle social problems. Social Impact Sukuk directs money towards initiatives that target the resolution of social problems, such as obtaining cheap housing, access to healthcare, quality education, and eradicating poverty. With the use of these sukuk products, investors may support charitable causes and generate income. Engaging stakeholders, including local communities, in sukuk projects also promotes social inclusion and ensures that the project's goals are in line with the needs and ambitions of the neighbourhood. The engagement of stakeholders helps sukuk programs achieve sustainable development goals. By the same token, it can be used to finance sustainable urban development projects, such as the construction of affordable housing, green building projects, and upgrades to the city's infrastructure. These investments help build inclusive, durable, and sustainable cities that are in line with SDG 11. Thus, sukuk can function to promote infrastructure and economic development, encourage community well-being, enhance clean energy, and aid in the fight against climate change [42].

However, a successful and effective incorporation of SDGs into sukuk practice may occur only when all the stakeholders of the Islamic finance sector, such as financial institutions, authorities, and market players, collaborate actively to take sustainability concerns in line with Shariah governance into account when making decisions [43]. For example, the regulator and the market should require greater SDG and ESG disclosure and reporting standards from issuers. A key component of sustainable sukuk is shariah governance. It should incorporate ESG factors into sukuk frameworks while ensuring adherence to Islamic norms. To match the issuing procedure with moral and ethical standards, shariah experts are essential. To foster accountability and transparency in sustainable sukuk transactions, reliable reporting and disclosure methods are crucial. Investors would be able to make informed decisions owing to disclosure frameworks that give thorough information on the social and environmental impacts of sukuk projects [44].

The establishment of sustainability sustainability-responsive standardized sukuk market with greater reporting frameworks and guidelines will improve transparency and comparability, and compliance in respect of sustainability objectives too. The reviewed literature importantly points to cooperation between financial institutions, authorities, and organizations representing the sector in establishing these rules. Regulatory standards and guidelines may successfully promote sustainable practices in Islamic sukuk transactions. They would encourage best practices and guarantee uniformity across sukuk issuances. These standards would offer a standardized framework for evaluating and reporting on sustainability performance. Making decisions about investing in sukuk-financed projects is made easier and encourages responsibility when SDG and ESG data are reported openly. While issuing firms and organisations may voluntarily take socio-ethical responsibility to avoid investing in unsustainable projects, the existence of sustainability sustainability-responsive regulatory framework additionally ensures that such organisations will comply with greater regulatory requirements in the interests of SDGs [45].

Likewise, the investors should be sensitive and alert before making investment decisions concerning the destination of their investment. If prospective investment is going to be applied to unsustainable projects, they will withdraw from investing or shift their investment to other investment projects that are more responsive to sustainability objectives. This suggests that sukuk issuers and investors should actively support sustainable development by investing in initiatives that tackle societal and environmental issues. Financial institutions, government agencies, and trade associations should work together to create thorough sustainability criteria that are suitable for Sukuk transactions. These sustainability guidelines would offer a consistent framework for measuring and disclosing sustainability performance [46].

In addition to these, a range of other pertinent factors may affect the development of sustainable sukuk practice. To begin with, the incorporation of sustainability concerns should be delicately balanced with sukuk market dynamics, including its size, growth patterns, participants, and regional variances. The variables that may affect the dynamics of price, market liquidity, sukuk supply and demand, trading on the secondary market, and the function of investors and financial institutions in the sukuk market may need to be reconciled with the SDGs. Also, the current sukuk ratings and risk management guidelines and practices are not quite SDGs-friendly. A careful reconsideration of such guidelines and practices may help ensure they would not treat SDGs as alien objectives. Hostile risk management procedures and inconsistent methods for evaluating and grading sukuk instruments may discourage the development of a sustainable practice of sukuk. Furthermore, the default contractual arrangements such as Ijarah, Mudarabah, Musharakah, and Wakalah that currently underlie sukuk structures may not be so SDGs oriented [46].

Understanding the many structures and forms of sukuk instruments and how these can be modified to reflect SDG objectives is an important consideration. The existing arrangements should either be engineered carefully or supplemented with innovative arrangements that concurrently preserve both Shariah principles and SDG objectives. Innovation and engineering are essential for advancing the sustainable practice of sukuk. The advancement of sustainability goals and the alignment of sukuk with SDG factors can be achieved through green sukuk, social impact sukuk, sustainability-linked sukuk, and technology-driven solutions. For instance, green sukuk, which focuses on funding initiatives with favourable environmental impacts, is a major innovation in sukuk. Investors may take part in green initiatives, including renewable energy, green infrastructure, and sustainable agriculture, due to these sukuk instruments. The concept of green sukuk is in line with sustainability and provides a means to direct funds toward initiatives that combat climate change and encourage environmental preservation. Similarly, social impact sukuk allocates funds to initiatives that benefit society, such as subsidized housing, healthcare, education, and poverty reduction [47].

Sukuk with a social impact gives investors the chance to support socially responsible projects while generating financial returns. These instruments promote sustainable development and meet societal requirements by incorporating social concerns into sukuk frameworks. Likewise, sustainability-linked sukuk ties the financial returns of sukuk instruments to the sustainability performance of the issuer. Key Performance Indicators (KPIs) about environment, society, or governance are included in the stated objectives of the sukuk project. The holders of sukuk earn additional returns if the issuer meets the predetermined goals. With the help of this innovation, issuers will be encouraged to adopt and uphold sustainable practices, assuring continued commitment to sustainability goals. Finally, Innovations in sukuk issuing and trading procedures have been made possible by advancements in technology.

Blockchain technology is used by digital sukuk, also known as tokenized sukuk, to enhance the effectiveness, efficiency, transparency, and accessibility of sukuk transactions. The growth and development of sustainable sukuk markets are eventually supported by these digital advances, which streamline issuance procedures, increase liquidity, and permit wider investor involvement. Adopting these ideas strengthens Islamic finance's contribution to sustainable development, draws in socially conscious investors, and encourages sustainable socio-economic development. Accordingly, expanding sustainable practices in Islamic finance requires ongoing study and innovation in sukuk.

CONCLUSION

A significant intersection of sustainable development and Islamic finance is found in sukuk. As Islamic financial securities, sukuk allow businesses to raise public finance via ethical methods to the benefit of community development. Sukuk are financial securities engineered in Islamic finance to replace interest-bearing conventional bonds. Unlike bondholders, investors in sukuk do not possess a debt obligation owed by the issuer. Instead, they own a fractional portion of the asset directly connected to the investment. They are beneficial to the issuers, investors, and the wider economy by providing ways to diversify investments, securitize dormant assets, draw both conventional and Islamic investors, and promote economic growth through investing in infrastructure developments and the provision of goods and services offered by the corporate sector. Its high emphasis on ethical investing and social justice has made it a perfect fit for the implementation of the Sustainable Development Goals (SDGs). Sukuk issues and transactions can be concurrently consistent with both Islamic financial principles and the global sustainability agenda. Sukuk provides cutting-edge financial tools that can directly support SDGs, such as access to affordable, renewable energy, infrastructure development, and the creation of sustainable cities and communities. It can be utilized to provide finance for initiatives and projects that are socially conscious and benefit society and the environment. It offers an exceptionally unique opportunity for sustainable practice, not only because it can comfortably combine Shariah compliance with the goals of sustainable development, but also because of its great capacity to organise dispersed small funds into well-defined development projects and combine sustainability with efficiency. The sustainability discourse initially emerged in Islamic finance as an inseparable element of ethical investment. Islamic moral values in economic activities, such as fair income distribution, prohibition of interest and uncertainty in transactions, and securing business partnerships, exert a significant bearing on preventing poverty, avoiding wastage, and enhancing sustainable economic improvement. It was also justified because sukuk issuers should recognise their corporate social responsibility to meet public expectations, while every stakeholder should work towards the establishment of an investment environment that is socially responsible. However, despite its great potential for establishing sustainability, the actual contribution of sukuk to sustainable development has been low. The core of current sukuk practice lies in ethical business that is not much concerned with the end use of the underlying investment, which results in lost chances to achieve the SDGs. The practice must transform to incorporate sustainable development objectives. Researchers have frequently found the integration of sustainable

objectives into the sukuk practice to be difficult. The Shariah governance and regulatory frameworks currently focus on monitoring only Shariah compliance of activities financed by sukuk rather than their contribution to the Sustainable Development Goals. A robust governance and regulatory framework guarantees that the underlying assets and activities financed by sukuk are not only compliant but also contribute positively to the Sustainable Development Goals. In such a framework, investors would be encouraged and able to align their sustainability expectations with those of the issuer, thereby improving sustainability performance and increasing responsibility. The establishment of sustainability sustainability-responsive standardized sukuk market with greater reporting frameworks and guidelines aside, the development of sustainable practice of sukuk would also be dependent on fostering an understanding of SDGs and ESG considerations among stakeholders as well as introducing pertinent adjustments or innovations. The variables that may affect the sukuk market dynamics, credit rating, and risk management practices that provide support services for sukuk practice and the Islamic model agreements that underlie sukuk finance may all need reconsideration and adjustments. Where shortcomings cannot be rectified via adjustments, then engineering and innovation would become essential for both ensuring Shariah governance and advancing the sustainable practice of sukuk.

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Author Contribution

Ataollah Rahmani led the conceptual framework and writing; Dandy Okorontah contributed to data analysis, research design, and literature review related to sustainable sukuk development.

Conflicts of Interest

All authors declare no conflict of interest.

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