



# From shariah to SDGs: a hybrid review of sustainable sukuk research

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Received  
20 July 2025  
Revised  
22 March 2026  
Accepted  
9 April 2026

## Abstract

**Purpose** - This study examines the intellectual structure and conceptual pillars of sustainable sukuk research, identifying theoretical, contextual, and methodological gaps and proposing a future research agenda.

**Method** - This study employs an integrated mixed-methods design combining bibliometric analysis with a Theory-Context-Method (TCM)-based Systematic Literature Review of 45 Scopus-indexed articles, analyzed using VOSviewer and RStudio, with article selection following the PRISMA protocol.

**Result** - A bibliometric analysis demonstrates significant growth in publications since 2019, with researchers from Malaysia and Indonesia leading the field. The analysis delineates four primary thematic clusters: green sukuk, Islamic finance, macroeconomic impact, and climate change. TCM indicates that 60% of studies are theoretical, with Maqasid al-Shariah emerging as the predominant focus. Geographic coverage is highly concentrated in Southeast Asia, while qualitative methodologies constitute 66.7% of the research approaches. Social sukuk and sustainability sukuk are largely absent as independent research topics, highlighting a fundamental misalignment between the ICMA-defined market architecture and the prevailing academic discourse.

**Implication** - Future research should examine social sukuk and sustainability sukuk as standalone instruments, extend empirical inquiry to GCC and African markets, and adopt quantitative and mixed-methods designs to advance the field from its current exploratory stage toward explanatory and policy-relevant research.

**Originality** - This is the first study to examine the full ICMA-defined sustainable sukuk spectrum as a unified ecosystem, delivering a comprehensive diagnosis of the field's structural gaps and a forward-looking research agenda.

**Keywords:** Islamic finance; sustainable sukuk; green sukuk; social sukuk; SRI sukuk

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## How to cite (APA Style):

Putri, F.S., & Setiawan, D. (2026). From shariah to SDGs: a hybrid review of sustainable sukuk research. *Journal of Islamic Accounting and Finance Research*, 8(1), 1-24. <https://doi.org/10.21580/jiafr.2025.8.1.28025>

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## Introduction

The contemporary financial landscape is undergoing a fundamental transformation, driven by an escalating global climate crisis and persistent social inequalities that necessitate a shift toward more ethical and resilient capital allocation. Within this context, the Islamic capital market has emerged as a significant contributor through the development of sustainable sukuk. These are Shariah-compliant investment certificates that represent proportional ownership in underlying assets or ventures and provide an inherent structural alignment with the United Nations Sustainable Development Goals (SDGs), as their asset-backed design and stringent Shariah governance requirements emphasize ethical screening, the avoidance of social harm, and a direct linkage to the real economy (Kassim & Abdullah, 2018).

The sustainable variant of sukuk channels proceeds exclusively toward projects that generate environmental or social benefits. It is currently defined as an expansive umbrella term that integrates three primary use-of-proceeds categories: green sukuk for environmental mitigation, social sukuk for welfare enhancement, and sustainability sukuk, which provides a hybrid framework for integrated impact (ICMA, 2024). Beyond these use-of-proceeds categories, SRI sukuk commonly refers to a jurisdictional regulatory label, most prominently Malaysia's Sustainable and Responsible Investment Sukuk framework, which strengthens market integrity through eligibility guidelines, external review requirements, and post-issuance reporting standards (M. Rahman et al., 2020). Together, these instruments represent a meaningful convergence between Islamic finance principles and the global ESG agenda, making sustainable sukuk an attractive option for both conventional and Islamic investors.

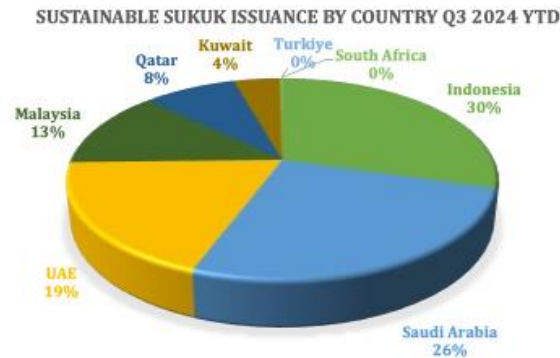
The development of sustainable sukuk has been shaped by key regulatory and sovereign milestones. Malaysia initiated this global movement with the introduction of the Sustainable and Responsible Investment (SRI) Sukuk framework in 2014, providing the necessary governance infrastructure for ethical projects. This development was reinforced by Malaysia's landmark corporate green sukuk issuance in 2017, which successfully demonstrated the commercial viability of the instrument (Abdullah & Keshminder, 2022). Subsequently, Indonesia issued the world's first sovereign green sukuk in 2018, raising US\$1.25 billion and demonstrating that sovereign labelled sukuk can simultaneously attract conventional, Islamic, and green investor segments while directing proceeds to eligible climate-related projects (Raeni et al., 2022). These milestones catalyzed broader market growth. Global sustainable sukuk issuance reached US\$11.9 billion by the third quarter of 2024, representing an 18% year-over-year increase. As illustrated in Figure 1, this growth is increasingly decentralized, with Gulf Cooperation Council (GCC) countries, particularly Saudi Arabia and the United Arab Emirates, accounting for approximately 58% of the total issuance volume (LSEG, 2024).

This trajectory signals that sustainable sukuk has evolved from a niche Southeast Asian innovation into a globally significant segment of the sustainable debt market.

**Figure 1.**

Sustainable sukuk issuance by country Q3 2024 YTD

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Source: (LSEG, 2024)

The academic importance of studying sustainable sukuk extends beyond its market size. As a Shariah-compliant instrument, it mobilizes capital from Muslim-majority economies through channels that conventional green bonds may not easily access, representing an underexplored mechanism for financing the Sustainable Development Goals (SDGs) (Ulfah et al., 2024). It also reflects ethical commitments rooted in the Islamic concept of khalifah, or stewardship of the earth, creating a normative alignment with long-term sustainability objectives that is often absent in conventional ESG instruments (Mangunjaya, 2023). Empirical studies further suggest tangible financial and policy benefits, including the presence of a greenium that lowers financing costs for issuers (Pirgaip & Arslan-Ayaydin, 2024), diversification and hedging benefits during major global shocks (Billah & Adnan, 2024; Narayan et al., 2022), and associations with carbon emission reductions (Suriani et al., 2024) and economic growth in issuing countries (Ali et al., 2024). However, these benefits depend heavily on credible governance and traceability mechanisms linking capital flows to project-level outcomes, without which greenwashing risks may undermine investor confidence (Bin-Armia and Riana, 2023).

Despite this growing evidence base, the academic literature on sustainable sukuk remains fragmented. Prior systematic reviews have examined only isolated segments of the ICMA-defined spectrum, with green sukuk and SRI sukuk studied separately, and social sukuk and sustainability sukuk virtually absent from the research landscape. This produces three compounding gaps: a theoretical gap, a contextual gap, and a methodological gap. Rather than directly resolving these gaps through new empirical

testing, the present study addresses them diagnostically through bibliometric analysis and a Theory-Context-Method (TCM) structured systematic review.

The following research questions structure the inquiry:

- RQ1. How has the global literature on sustainable sukuk evolved in terms of publication trends, key sources, contributing authors, and institutions?
- RQ2. What are the dominant theories applied, contexts examined, and methods employed in sustainable sukuk studies, and what gaps remain across these dimensions?
- RQ3. What future research directions can be identified to advance sustainable sukuk scholarship from its current exploratory stage toward explanatory and policy-relevant inquiry?

### Literature Review

The International Capital Market Association (ICMA, 2024) classifies sustainable sukuk into three use-of-proceeds categories. Green sukuk directs proceeds toward environmental projects, such as renewable energy and climate change adaptation. Social sukuk channels capital toward welfare sectors, including education, healthcare, and affordable housing. Sustainability sukuk combines both environmental and social objectives within a single hybrid instrument. As Shariah-compliant asset-backed securities, all three categories require that proceeds be linked to tangible underlying assets consistent with Islamic law, embedding an ethical accountability layer absent from conventional sustainable finance instruments (Kassim & Abdullah, 2018).

Within the Malaysian regulatory context, Sustainable and Responsible Investment (SRI) Sukuk refers to a governance framework introduced by the Securities Commission Malaysia in 2014 as the world's first regulatory architecture for sustainable Islamic bonds (M. Rahman et al., 2020). Rather than constituting a fourth product category, SRI sukuk is a jurisdictional compliance label encompassing eligibility guidelines, external review requirements, and post-issuance reporting standards. As Hasan et al. (2022) define it, SRI encompasses any investment process combining financial and ESG objectives, making the Malaysian framework an institutional operationalization of the ICMA classification rather than a departure from it.

Green sukuk has attracted the greatest academic attention. Its normative legitimacy is grounded in *Maqasid al-Shariah*, which emphasizes environmental preservation (Kassim & Abdullah, 2018), the concept of *khalifah*, which positions humans as stewards of the earth (Mangunjaya, 2023), and *La Darar wa la Dirar*, which prohibits harm and functions as a negative screening criterion for sukuk proceeds (Jalili et al., 2025). Empirically, findings are mixed. Positive evidence includes significant abnormal stock returns upon issuance (Riaz et al., 2024), a greenium reflecting investor willingness to

accept lower yields (Pirgaip & Arslan-Ayaydin, 2024), and portfolio diversification benefits during crises (Billah & Adnan, 2024; Narayan et al., 2022). However, secondary market performance is driven more by macroeconomic conditions than sustainability sentiment (Siswantoro & Surya, 2021), and concerns about greenwashing persist due to weak impact verification mechanisms (Bin-Armiya & Riana, 2023).

Research on SRI sukuk has developed in parallel, concentrated primarily in Malaysia. Studies examine structural compliance requirements (Noordin et al., 2018), investor and issuer motivations (M. Rahman et al., 2020), and the potential of SRI sukuk for financing social projects in education and healthcare (Kassim & Abdullah, 2018). Delle Foglie & Keshminder (2024) provide the only dedicated bibliometric review, documenting the absence of globally standardized frameworks and the dominance of Southeast Asian research. This body of work remains largely descriptive, institutionally focused, and geographically narrow.

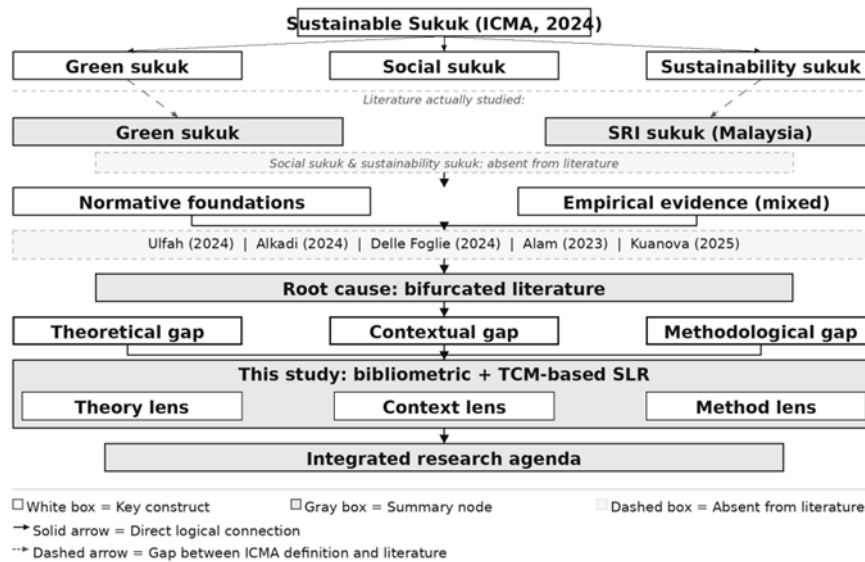
Despite formal recognition by ICMA, social sukuk and sustainability sukuk as standalone instruments are largely absent from the academic literature. No study specifically examines the financial performance, investor behavior, or sustainability outcomes of pure social sukuk independently of the SRI sukuk framework. Sustainability sukuk similarly remains unexamined as a distinct instrument. This absence is consequential because these categories represent precisely where Islamic jurisprudential principles emphasizing social welfare are most directly expressed, yet their theoretical foundations and empirical dynamics remain entirely uncharted.

Prior reviews have each studied only one segment in isolation. Ulfah et al. (2024) and Alkadi (2024) focus exclusively on green sukuk. Delle Foglie & Keshminder (2024) examine SRI sukuk alone. Alam et al. (2023) review 15 green sukuk articles in the context of sustainable development goals. Kuanova et al. (2025) analyze the broader sukuk literature and find growing ESG themes but persistent fragmentation. None examines green sukuk, social sukuk, SRI sukuk, and sustainability sukuk as components of a unified ecosystem, producing a fragmented body of knowledge where findings cannot be meaningfully compared or synthesized.

This fragmentation produces three interrelated research gaps. The theoretical gap arises from the dominance of atheoretical studies and the application of theories in isolation across separate sub-literatures, which prevents the development of a unified explanatory framework for the full sustainable sukuk spectrum. The contextual gap reflects severe geographic concentration in Malaysia and Indonesia, while GCC markets, which accounted for approximately 58 percent of global sustainable sukuk issuance by the third quarter of 2024 (LSEG, 2024), alongside Central Asia and Sub-Saharan Africa remain largely unstudied. Finally, the methodological gap stems from the dominance of qualitative and descriptive approaches, with rigorous empirical methods remaining

scarce across all segments. These gaps are mutually reinforcing, and they collectively prevent the field from producing generalizable and policy-relevant knowledge.

**Figure 2.**  
*Conceptual Framework*



Source: Author’s own creation

As illustrated in Figure 2, the integrated conceptual framework of the present study maps the distance between the full ICMA-defined sustainable sukuk spectrum and the fragmented state of existing research. The three gaps identified above serve as the bridge between what has been studied and what remains unexamined.

**Research Methods**

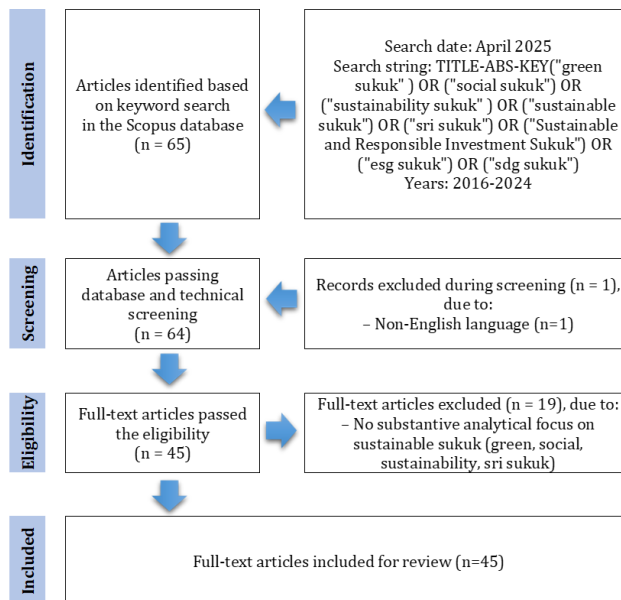
This study employs an integrated mixed-methods design combining quantitative bibliometric analysis with a qualitative Theory-Context-Method (TCM)-based Systematic Literature Review, following a methodological approach consistent with comparable hybrid reviews in sustainability research (Gulluscio et al., 2020; Nyabakora & Mohabir, 2024).

Bibliographic data were retrieved from Scopus, selected because it is among the largest curated abstract and citation databases offering structured metadata essential for bibliometric mapping (Baas et al., 2020), and because prior sustainable sukuk reviews have consistently relied on it, ensuring comparability of findings (Alkadi, 2024; Delle Foglie & Keshminder, 2024; Ulfah et al., 2024). The search covered 2016 to 2024 using the keywords: ("green sukuk" OR "social sukuk" OR "sustainability sukuk") OR ("sustainable sukuk") OR ("sri sukuk") OR ("Sustainable and Responsible Investment

Sukuk") OR ("esg sukuk") OR ("sdg sukuk"), yielding 65 records. Article selection followed the PRISMA protocol (Page et al., 2021), as illustrated in Figure 3. One non-English article was excluded at screening, and 19 articles lacking a substantive analytical focus on sustainable sukuk were excluded at eligibility, producing a final sample of 45 articles. Bibliometric analysis was conducted using VOSviewer and RStudio to map publication trends, citation patterns, and keyword clusters. TCM was then applied to each article across three dimensions: theories employed, geographic contexts examined, and methods adopted, enabling a structured diagnosis of gaps in the literature.

**Figure 3.**

*PRISMA diagram flow*



Source: Author's own creation

## Results and Discussion

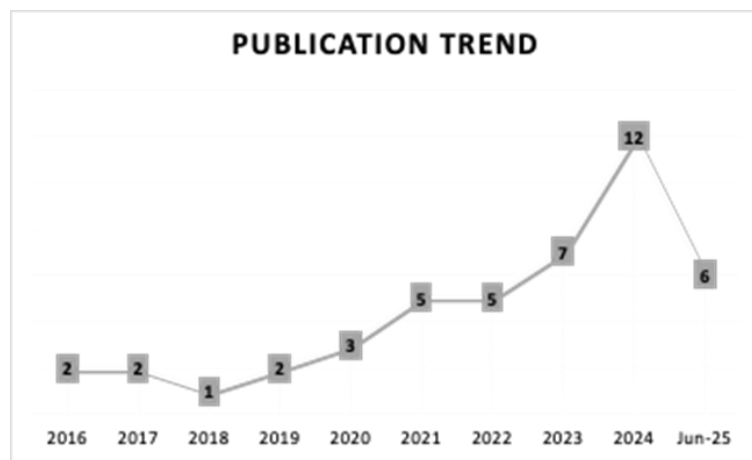
### Publication Trends and Intellectual Landscape (RQ1)

As shown in Figure 4, the sustainable sukuk literature has grown substantially since 2019, reaching a peak of 12 articles in 2024. This growth trajectory closely mirrors the market expansion that followed Malaysia's inaugural corporate green sukuk issuance in 2017 (Abdullah & Keshminder, 2022) and Indonesia's first sovereign green sukuk in 2018 (Raeni et al., 2022), suggesting that major regulatory and sovereign milestones serve as catalysts for academic inquiry. As detailed in Table 1, publications are distributed across reputable Q1 and Q2 journals, with the International Journal of Islamic and Middle Eastern Finance and Management leading with four articles. The concentration of output in Emerald Publishing journals reflects the alignment between

sustainable sukuk scholarship and the Islamic finance and sustainability accounting communities. The presence of Environment and Planning A (SJR 2.047, Q1) among the source journals signals that sustainable sukuk research is beginning to attract cross-disciplinary interest beyond the Islamic finance field, extending into environmental policy studies. This broader reach is consistent with the thematic evolution documented by Kuanova et al. (2025), who found growing ESG-related themes in the general sukuk literature alongside persistent disciplinary fragmentation.

**Figure 4**

*Publication trend*



Source: Author's own creation

Authors and institutions from Malaysia and Indonesia dominate the research landscape. As shown in Tables 2 and 3, Keshminder J.S. of Universiti Teknologi MARA is the most productive and most cited author, with four articles generating 104 citations, a finding consistent with Delle Foglie & Keshminder (2024), who identified this scholar as a central figure in SRI sukuk scholarship. The International Islamic University Malaysia leads institutional output with nine articles, reflecting its strategic commitment to sustainable Islamic finance as a research priority (IIUM, 2020). This concentration of authorship in two countries reflects the institutional infrastructure, regulatory familiarity, and funding environments that have made Malaysia and Indonesia the primary sites of sustainable sukuk development. The most influential articles, listed in Table 4, confirm that foundational intellectual contributions came from scholars examining the structural, regulatory, and normative dimensions of green sukuk and SRI sukuk. Works such as Liu & Lai (2021), with 80 citations, and Morea & Poggi (2017), with 40 citations, established the conceptual vocabulary and analytical frameworks that subsequent empirical studies have drawn upon, creating a citation concentration that reinforces the field's Southeast Asian and green sukuk orientation.

**Table 1***Most relevant journals*

Journal	Publisher	NP	TC	h	SJR 2024	Quartile
International Journal Of Islamic And Middle Eastern Finance And Management	Emerald	4	12	2	0.525	Q2
Qualitative Research In Financial Markets	Emerald	3	93	3	0.571	Q2
Journal Of Islamic Accounting And Business Research	Emerald	3	51	3	0.424	Q2
International Journal Of Energy Economics And Policy	Econjournal	3	45	2	0.343	Q2
Iop Conference Series: Earth And Environmental Science	Institute of Physics	3	28	2	0.214	-
Environmental Economics	LLC CPC Business Perspectives	2	43	2	0.294	Q2
Environment And Planning A	Sage	1	80	1	2.047	Q1
Journal Of Sustainable Finance And Investment	Taylor and Francis	1	35	1	1.146	Q1
Financial Innovation	Springer	1	23	1	1.287	Q1

Source: Processed using R-Studio, 2025

Keyword co-occurrence analysis, visualized in Figure 5 and detailed in Table 5, reveals four thematic clusters. The red cluster is centered on green sukuk and SRI sukuk as core instruments, with COVID-19 also appearing, reflecting research on sukuk for post-pandemic recovery. The green cluster is anchored in Islamic finance and socially responsible investment. The blue cluster links sustainable sukuk to macroeconomic outcomes such as economic growth and emissions reduction. The yellow cluster connects climate change as the primary external driver to standard analytical methods. The near-complete absence of social sukuk and sustainability sukuk as standalone keyword nodes across all four clusters confirms at the bibliometric level what the literature review established theoretically: that two of the three ICMA-defined categories (ICMA, 2024) remain largely invisible in the academic discourse.

**Table 2**

*Most productive authors*

Author	Current Affiliation	Country	NP	TC	h
Keshminder Js	Universiti Teknologi MARA	Malaysia	4	104	4
Abdullah Ms	Universiti Teknologi MARA	Malaysia	3	83	3
Engku Ali Era	International Islamic University Malaysia	Malaysia	3	25	2
Siswanto D	Universitas Indonesia	Indonesia	2	26	2
Alam A	Universitas Muhammadiyah Surakarta	Indonesia	1	29	1
Ashfahany Ae	Universitas Muhammadiyah Surakarta	Indonesia	1	29	1
Chowdhury Nt	University of Malaya	Malaysia	1	23	1
Apriliadi A	Universitas Padjadjaran	Indonesia	1	21	1
Cupian C	Universitas Padjadjaran	Indonesia	1	21	1
Delle Foglie A	University of Macerata	Italy	1	21	1

Source: Processed using R-Studio, 2025

**Table 3**

*Top productive universities*

Affiliation	Country	Freq
International Islamic University Malaysia	Malaysia	9
Federal Polytechnic Ilaro	Nigeria	7
King Abdulaziz University	Saudi Arabia	5
Universitas Padjadjaran	Indonesia	3
Universitas Pembangunan Nasional Veteran Jakarta	Indonesia	3

Source: Processed using R-Studio, 2025

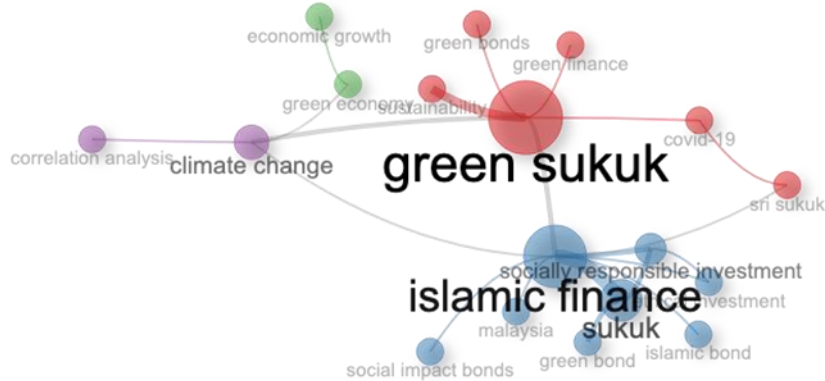
As illustrated in Figure 6, the thematic overlay map reveals a temporal progression from foundational normative themes around 2020 to 2021, such as Islamic finance and framework development, toward more empirical themes around 2023 to 2024, such as sustainability assessment and comparison with green bonds. The color of each node represents the median publication year, with older themes in blue or purple and more recent themes in yellow or green. Terms such as green sukuk and Islamic finance appear in cooler colors, confirming their foundational status, while sustainability, green bonds, and economic growth appear in warmer colors, reflecting their more recent emergence. This temporal shift indicates the field is beginning a transition from normative justification toward impact analysis, though the absence of social sukuk and sustainability sukuk from the overlay confirms these categories have not yet entered the research mainstream.

**Table 4***Top-cited articles*

ID	Purpose	Subject	Method	TC	Reference
1	To analyse the recent development of green sukuk in Malaysia and addresses some existing contradictions of green finance	Documents commonly used for business practices in Malaysia, 23 experts to related field	Desk based document analysis and semi-structured interview	80	(Liu & Lai, 2021)
2	This study propose the use of green sukuk as an alternative financial instrument to limit the extent of leverage associated with financing	Italian on-shore wind farm.	Case study analysis	40	(Morea & Poggi, 2017)
3	Exploring SRI sukuk model based on Musharakah to develop waqf properties and assets under Malaysia's SRI sukuk framework	Past literature and practices and SRI sukuk's experts and industry practitioners.	Desk based document analysis and semi-structured interview	38	(Zain & Muhamad Sori, 2020)
4	Analyze the drivers influencing green sukuk issuance and identify the mechanism to propose strategic actions geared for the policymakers	4 participant from Green Sukuk Issuer company	Semi-structured interviews	35	(Abdullah & Keshminder, 2022)
5	Exploring the challenges encountered by green sukuk issuers and structure green sukuk framework to boost the market growth	4 expert from Green Sukuk Issuer company	Multiple case study interview	32	(Keshminder et al., 2022)
6	Identify the development trend in green sukuk and explain the emergence of green sukuk investments	15 publication during 2016-2022 from Scopus database	Systematic literature review	29	(Alam et al., 2023)
7	Review on how Khazanah's Sukuk Ihsan compliance with the SRI sukuk framework set by SC Malaysia	Khazanah's Sukuk Ihsan	Critical review	26	(Noordin et al., 2018)

Source: Author's compilation

**Figure 5**  
Co-occurrences network



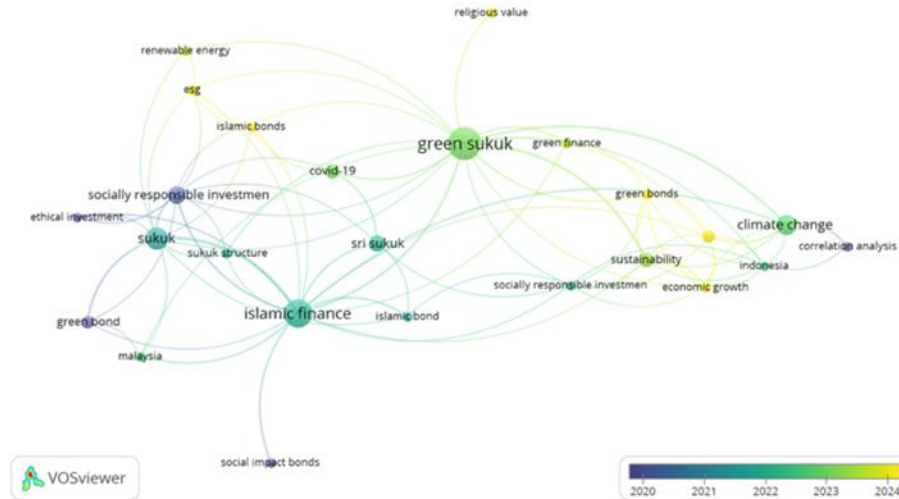
Source: Processed using R-Studio, 2025

**Table 5**  
Keyword selected for network parameters

Node	Betweenness	Closeness	PageRank
<b>Red Cluster: Sustainable Sukuk Instruments</b>			
green sukuk	53.800	0.033	0.147
sri sukuk	3.200	0.025	0.040
covid-19	1.600	0.023	0.041
sustainability	0.000	0.022	0.040
green bonds	0.000	0.022	0.024
green finance	0.000	0.022	0.024
<b>Green Cluster: Islamic Finance Context</b>			
islamic finance	92.650	0.038	0.196
sukuk	16.000	0.026	0.091
socially responsible investment	0.750	0.026	0.067
green bond	0.000	0.018	0.029
ethical investment	0.000	0.024	0.037
islamic bond	0.000	0.024	0.023
malaysia	0.000	0.024	0.023
social impact bonds	0.000	0.024	0.023
<b>Blue Cluster: Macroeconomic Impact</b>			
green economy	16.000	0.022	0.051
economic growth	0.000	0.016	0.03
<b>Yellow Cluster: Driving issues</b>			
climate change	44.000	0.032	0.089
correlation analysis	0.000	0.021	0.025

Source: Processed using R-Studio, 2025

**Figure 6**  
*Overlay co-occurrence network*



Source: Processed using VOSviewer, 2025

## Theoretical, Contextual, and Methodological Pillars (RQ2)

### Theory Analysis

Table 6 presents the distribution of theoretical frameworks across the 45 articles. The most striking finding is that 27 of 45 articles, representing 60 percent of the sample, are atheoretical, proceeding without an explicitly stated guiding framework. Among theory-based studies, Maqasid al-Shariah is the most frequently applied framework, appearing in 10 articles. Signaling theory is employed in two articles, behavioral theories account for three articles, and various pricing theories account for three articles. The aggregate number of theory applications (52) exceeds the number of articles (45) because several studies apply multiple frameworks simultaneously.

The 60 percent atheoretical rate is more severe than what prior reviews have documented for individual sub-categories of the literature. Ulfah et al. (2024) found a comparable dominance of descriptive approaches in their structured review of green sukuk, and Alkadi (2024) similarly noted the absence of theoretical integration across their 62-article green sukuk sample. The present study extends those observations to the full sustainable sukuk spectrum and demonstrates that theoretical poverty is not confined to one sub-category but is a structural characteristic of the field as a whole. The dominance of Maqasid al-Shariah reveals that the literature has been primarily engaged with establishing the Islamic jurisprudential legitimacy of sustainable sukuk, that is, with justifying why these instruments should exist in accordance with Islamic ethical

principles, rather than with building explanatory frameworks capable of predicting how they behave in financial markets or what conditions determine their sustainability impact. Signaling theory, which has demonstrated strong explanatory power in the green bond literature by explaining market reactions to issuance announcements (Riaz et al., 2024), remains applied in only two studies. Stakeholder theory, agency theory, and institutional theory, which are standard analytical lenses in sustainable finance research, are absent from the reviewed literature. This theoretical deficit constitutes the most fundamental limitation of the field. Without unified theoretical frameworks that span the full ICMA-defined spectrum (ICMA, 2024), findings from individual studies cannot be accumulated into a coherent and generalizable body of knowledge capable of informing policy or guiding investment decisions.

**Table 6***Theories employed in sustainable sukuk research*

No.	Theory	NP	Sample Reference
1	Resource-Based View (RBV) Theory	1	(Azman et al., 2022)
2	Signaling Theory	2	(Endri et al., 2022; Riaz et al., 2024)
3	Theory of Consumption Value	1	(Faisal et al., 2023)
4	Pro-environmental Planned Behavior (PEPB) theory	1	(Timur et al., 2025)
5	Planned Behavioral Theory	1	(Akinde et al., 2025)
6	Behavioral Finance Theory	1	(Akinde et al., 2025)
7	Investor Tastes Theory	1	(Pirgaip & Arslan-Ayaydin, 2024)
8	Asset Pricing Theory	1	(Pirgaip & Arslan-Ayaydin, 2024)
9	Bond Pricing Theory	1	(Pirgaip & Arslan-Ayaydin, 2024)
10	Islamic Finance Theory	3	(Mujahid & Adawiah, 2016; Zain & Muhamad Sori, 2020)
11	Sustainability Theory	1	(Faizi et al., 2024)
12	Game Theory	1	(Rahman et al., 2024)
13	<i>Maqasid al-Shariah</i> theory	10	(Alam et al., 2023; Kassim & Abdullah, 2018; Ulfah et al., 2024)
14	No guiding theory	27	(Alkadi, 2024)
	Total	52	

*\*Note: The sum of theory applications (52) exceeds the total number of articles (45) because some studies employed multiple theoretical frameworks.*

Source: Author's compilation

### Context Analysis

Table 7 presents the geographic distribution of the 45 articles. Malaysia accounts for 12 studies and Indonesia for 11, together representing 51 percent of the sample. Saudi Arabia, Italy, and Nigeria each contribute one country-specific study. The remaining 19 articles adopt a general or multi-country framing without a specific geographic focus.

The concentration of research in Malaysia and Indonesia reflects the reality that these two countries pioneered sustainable sukuk regulatory frameworks and were the first to issue green sukuk at scale. However, this concentration has produced a structural bias in the knowledge base with significant consequences for the field's analytical reach. The theories, frameworks, and findings calibrated to the Malaysian SRI Sukuk regulatory environment and the Indonesian sovereign green sukuk programme cannot be assumed to apply to GCC markets, where sovereign wealth funds, different legal traditions, and distinct investor bases shape issuance dynamics in fundamentally different ways. This geographic imbalance is particularly striking in light of market data showing that GCC countries accounted for approximately 58 percent of global sustainable sukuk issuance by the third quarter of 2024 (LSEG, 2024). The near-complete absence of empirical research on the GCC market means the academic literature is most developed precisely where the market is smallest and most underdeveloped precisely where the market is largest. Delle Foglie & Keshminder (2024) identified geographic concentration as a limitation of the SRI sukuk literature specifically; the present study confirms and extends this finding to the full sustainable sukuk landscape, and further documents the absence of research from Central Asia, Sub-Saharan Africa, and South Asia, regions where Islamic finance is growing but where sustainable sukuk scholarship has not yet emerged.

**Table 7**

*Article distribution based on country*

Country	NP	Sample Reference
Indonesia	11	(Ali et al., 2024; Santoso, 2020)
Malaysia	12	(Azman et al., 2022; Liu & Lai, 2021)
Saudi Arabia	1	(Shalhoob, 2023)
Italy	1	(Morea & Poggi, 2017)
Nigeria	1	(Akinde et al., 2025)
Other (General)	19	(Riaz et al., 2024; Rozman & Azmi, 2022)
Total	45	

Source: Author's compilation

### Method Analysis

Table 8 presents the methodological distribution across the 45 articles. Qualitative approaches dominate, accounting for 30 articles or 66.7 percent of the sample. Within this category, literature reviews and critical reviews account for 20 articles, semi-structured interviews for nine articles, and case study analyses for five articles. Quantitative approaches account for 14 articles or 31.1 percent, employing methods ranging from event studies and regression analysis to more advanced techniques such as DCC-GARCH, propensity score matching, and machine learning models. Only one study employs a mixed-methods design.

**Table 8**

*Research methodology employed in sustainable sukuk research*

Research methodology		Total	Sample Reference
Quantitative (14)	Experimental	9	(Pirgaip & Arslan-Ayaydin, 2024)
	Questionnaire survey	5	(Faisal et al., 2023)
Qualitative (30)	Review	20	(Radzi & Sakai, 2022)
	Interviews	10	(Endri et al., 2022)
Mix Method (1)	Event study	1	(Bin-Armia & Riana, 2023)
	MGARCH-DCC	1	(Narayan et al., 2022)
Analytical techniques (45)	PLS-SEM	2	(Timur et al., 2025)
	Regression analysis	3	(Suriani et al., 2024)
	PSM	1	(Pirgaip & Arslan-Ayaydin, 2024)
	Exploratory factor analysis	1	(Marwan et al., 2024)
	T-test	2	(Azman et al., 2022)
	Indexed-based analysis	2	(Siswantoro, 2018)
	DCC-GARCH t-Copula	1	(Billah & Adnan, 2024)
	Machine learning model	1	(Akinde et al., 2025)
	Critical review	7	(Noordin et al., 2018)
	Systematic literature review	6	(Alam et al., 2023)
	Bibliometric analysis	2	(Kuanova et al., 2025)
	Case study analysis	5	(A. Rahman et al., 2024)
	Analytical Network Process (ANP)	1	(Endri et al., 2022)
Semi-structured interviews	9	(M. Rahman et al., 2020)	
Black-letter law approach & two-tailed assessments	1	(Bin-Armia & Riana, 2023)	

Source: Author's compilation

The overwhelming dominance of qualitative and descriptive approaches confirms that the sustainable sukuk field remains in an exploratory phase in which scholars are still mapping institutional arrangements and documenting normative foundations rather than testing theoretical propositions or estimating causal relationships. Ulfah et al. (2024) found that fewer than 30 percent of green sukuk studies employ quantitative methods, a proportion that the present study replicates across the broader sustainable sukuk spectrum, suggesting that methodological imbalance is not improving as the field matures. The near-complete absence of mixed-methods research is a particular concern because the most pressing questions in the field, including whether sustainable sukuk genuinely reduces carbon emissions (Suriani et al., 2024), whether the greenium reflects genuine ethical commitment or financial opportunism (Pirgaip & Arslan-Ayaydin, 2024), and whether impact reporting mechanisms are effective in preventing greenwashing (Bin-Armia & Riana, 2023), require precisely the combination of quantitative estimation and qualitative interpretation that mixed methods provide. The presence of advanced techniques such as DCC-GARCH and machine learning in a small number of quantitative studies demonstrates that the methodological capacity exists within the research community; the challenge is to extend these approaches systematically across the full range of sustainable sukuk types and geographic contexts.

### **Research Gaps, Future Research Agenda, and Implications (RQ3)**

The three TCM dimensions converge on a coherent diagnosis of the sustainable sukuk literature's structural limitations. The theoretical gap, the contextual gap, and the methodological gap are not independent but are mutually reinforcing. The dominance of atheoretical qualitative studies concentrated in Malaysia and Indonesia has produced a body of knowledge that is internally consistent but externally limited: it describes how sustainable sukuk operates within specific jurisdictional contexts but cannot explain why it works, predict how it would perform in different markets, or provide the causal evidence needed to assess its actual sustainability impact. The field's most fundamental unresolved questions, including the empirical existence and persistence of the greenium across market conditions, the effectiveness of Shariah governance mechanisms in preventing greenwashing, and the potential of social sukuk and sustainability sukuk as standalone financing instruments, remain unanswered precisely because the methodological and theoretical tools necessary to address them have not yet been systematically applied.

The future research agenda emerging from this analysis is organized around three priorities that carry direct implications for both scholarship and practice. First, the theoretical gap calls for the systematic application of mainstream finance and organizational theories, including signaling theory, stakeholder theory, and institutional theory, across the full ICMA-defined sustainable sukuk spectrum rather than within

isolated sub-categories. Future studies should test whether theoretical frameworks that explain conventional green bond behavior translate to the Islamic finance context and whether Shariah governance mechanisms modify or amplify their predicted effects. Second, the contextual gap calls for empirical research in GCC markets, Central Asia, and Sub-Saharan Africa, with particular attention to how different regulatory environments, investor bases, and legal traditions shape the issuance, pricing, and sustainability impact of sukuk. For policymakers, this finding underscores the urgency of developing locally calibrated regulatory frameworks rather than transplanting the Southeast Asian model to contexts with fundamentally different institutional conditions. Third, the methodological gap calls for a deliberate shift toward quantitative and mixed-methods designs capable of supporting causal inference, longitudinal tracking of sustainability outcomes, and cross-market generalization, which would enable the field to move beyond its current exploratory stage toward explanatory and policy-relevant inquiry.

### Conclusion

This study provides the first integrated review of the global sustainable sukuk research landscape that examines the full ICMA-defined spectrum as a unified ecosystem rather than studying individual sub-categories in isolation. Three principal findings emerge. First, addressing RQ1, the bibliometric analysis confirms substantial growth in sustainable sukuk publications since 2019, dominated by researchers from Malaysia and Indonesia, with four primary thematic clusters and a clear temporal evolution from normative foundational themes toward more empirical and comparative inquiry. Second, addressing RQ2, the TCM analysis reveals that 60 percent of studies are atheoretical, *Maqasid al-Shariah* dominates among theory-based studies, geographic coverage is heavily concentrated in Southeast Asia despite GCC markets accounting for 58 percent of global issuance (LSEG, 2024), and qualitative approaches represent 66.7 percent of the methodological landscape. Third, addressing RQ3, the bifurcated development of green sukuk and SRI sukuk as separate sub-literatures has produced a body of knowledge incapable of addressing the full ICMA spectrum, with social sukuk and sustainability sukuk virtually absent as standalone objects of inquiry, generating three interrelated gaps: theoretical, contextual, and methodological.

This study is subject to two limitations. The analysis is confined to Scopus-indexed publications, meaning studies published in non-indexed journals, industry reports, and policy documents are excluded, which may underrepresent practitioner-oriented knowledge on sustainable sukuk. As the bibliographic search was conducted in April 2025, studies published after this date are not captured, which is a relevant constraint given the rapid growth of sustainable sukuk literature documented in the findings.

The findings carry broader implications for scholarship and practice. For scholars, the TCM framework provides a replicable diagnostic tool for adjacent fields in Islamic sustainable finance, while demonstrating that green bond theoretical frameworks cannot be transplanted to sustainable sukuk without accounting for its distinctive Islamic institutional and jurisprudential characteristics. For policymakers, the geographic concentration of existing research underscores the urgency of developing locally calibrated regulatory frameworks in GCC and African jurisdictions, alongside incentives to encourage issuance of the underutilized social sukuk and sustainability sukuk categories. For issuers, robust and independently verifiable impact reporting is a precondition for long-term market credibility, given persistent greenwashing concerns. For investors, decisions in GCC, African, and Central Asian markets must currently be made with limited empirical guidance, a knowledge gap that researchers and practitioners share a common interest in closing.

### Acknowledgements

We acknowledge funding from the Ministry of Education, Culture, Research, and Technology of Indonesia (Program Tesis Magister, Universitas Sebelas Maret, No. 1186.1/UN27.22/PT.01.03/2025).

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