

Developing and Validating the Green Banking Practices Index (GBPI): A Bilingual Framework for Pakistan's Dual-Banking System

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Abstract

This study creates and tests the Green Banking Practices Index (GBPI) for Pakistan's dual-banking system. It combines Maqasid al-Shariah ethical principles with standard sustainability benchmarks so that Islamic and conventional banks can be compared fairly. Using a sequential explanatory mixed-methods design, Phase 1 combined 28 indicators from a thematic analysis of 200 corporate documents (2019–2023) from 30 banks (15 Islamic and 15 conventional) and NVivo-coded semi-structured interviews with 21 experts (8 senior managers, 5 Shariah scholars, 4 SBP regulators, and 4 consultants). In Phase 2, the index was checked for content validity (S-CVI/Ave=0.94), inter-coder reliability (Cohen's κ =0.89), internal consistency (Cronbach's α =0.91), and exploratory factor analysis (EFA: 76.8% variance explained, KMO=0.87, Bartlett's p <0.001). In policy-ethical integration, Islamic banks do better (M =73.8, SD =7.5 vs. M =52.4, SD =13.6; t =5.22, p =0.001) and slightly better in risk-financing (M =68.4 vs. 61.7; p =0.096). In disclosure, conventional banks do better (M =62.3 vs. 48.6; t =-3.45, p =0.002). Total scores are close (M =61.5 vs. 58.6; p =0.312). Qualitative insights identify fundamental drivers: Shariah-compliant ethics for Islamic banks and regulatory adherence for conventional banks. The GBPI gives regulators a standardized tool to use in Pakistan, which is very vulnerable to climate change (ranked in the top 10 in the world). It also fits into the SBP's 2023-2028 framework, which has effects on mandatory disclosures, tiered incentives, and capacity-building. Limitations include reliance on disclosure; future research suggests tracking over time.

Keywords: Pakistan, Maqasid Al-Shariah, Mixed-Methods Validation, Islamic Finance, Green Banking, And Sustainability Index.

Introduction

Sustainable finance has gone from being a small part of corporate social responsibility to being a key part of keeping the financial system stable. By 2023, the global sustainable finance market was worth more than USD 8 trillion. This was mostly because central banks started to include climate-related risks in their stress testing, prudential regulation, and supervisory frameworks. Environmental risks, which include physical, transition, and liability aspects, are now widely seen as financially important because they can lower the quality of assets, destabilize balance sheets, and raise systemic risk. In response, international groups like the Network for Greening the Financial System (NGFS) and the International Sustainability Standards Board (ISSB) have pushed for standardized ways for banks to manage, report, and govern environmental risks.

Even with these changes, the way we measure and evaluate green banking practices is still not very clear or consistent, especially in emerging economies where there are a lot of different institutions and rules. Most of the current green banking and ESG assessment frameworks are based on traditional, interest-based financial systems. They focus on measurable indicators like disclosure intensity, green asset ratios, and carbon exposure. These tools make it easier to compare mature markets, but they also assume that all of them have the same basic ideas about making money and following the rules. As a result, they do not fully capture sustainability practices that are built into different ethical and governance logics.

This limitation is particularly evident in dual-banking systems, wherein Islamic and conventional banks coexist under a singular regulatory framework yet are regulated by fundamentally distinct normative principles. Islamic finance is based on Shariah principles that include caring for the environment as part of a larger moral economy that includes trusteeship (amanah), vicegerency (khilafah), justice (adl), and the pursuit of public welfare (maslahah). In this framework, sustainability is not merely instrumental or driven by compliance; it represents an inherent ethical duty rooted in the objectives of Islamic law (Maqasid al-Shariah). Nonetheless, current sustainability metrics seldom incorporate these ethical aspects, frequently assessing Islamic banks via disclosure-focused indicators that may minimize genuine sustainability integration while exaggerating symbolic compliance.

Pakistan offers a notably significant empirical context to investigate this measurement issue. Its banking system is based on a fully integrated dual-banking model. Islamic banks hold more than one-fifth of all banking assets and grow at rates that are always higher than those of traditional banks. The State Bank of Pakistan has also stepped up its efforts to regulate sustainability by updating its green banking guidelines and creating a comprehensive framework for the banking sector's sustainability. This requires all banks to manage environmental and social risks, set green financing targets, and make more information available. These changes come at a time when Pakistan is more vulnerable to climate change, making the banking sector's role in funding climate adaptation and mitigation even more important.

The lack of a context-sensitive and paradigm-neutral measurement framework constitutes a significant research challenge. Universal ESG and green banking indices,

despite their methodological rigor, may yield ethically asymmetric evaluations by favoring market-driven disclosure and product innovation over intrinsic ethical governance. This measurement gap has important effects: regulators don't have reliable benchmarking tools, investors get misleading signals about sustainability, and there aren't enough chances for cross-paradigm learning in dual-banking systems.

In light of this, the current study tackles a distinct conceptual, methodological, and contextual research deficiency. In terms of ideas, previous studies have not done a good job of incorporating Islamic ethical principles, especially Maqasid al-Shariah, into formal models for assessing sustainability. Methodologically, current studies predominantly utilize disclosure-based scoring or singular methodological frameworks, resulting in restricted psychometric validation. In terms of context, there isn't much empirical evidence from emerging economies that are vulnerable to climate change and have dual-banking systems.

Thus, the objective of this study is to create and empirically substantiate a Green Banking Practices Index (GBPI) that facilitates equitable, dependable, and contextually relevant evaluation of sustainability performance among Islamic and conventional banks. The GBPI combines traditional measures of sustainability, like environmental risk governance, green financing, operational eco-efficiency, and stakeholder disclosure, with ethical and policy integration standards based on Maqasid al-Shariah. In this way, the index offers a "bilingual" measurement framework that can capture both instrumental and normative sustainability logics without favoring one over the other.

The study is directed by the subsequent research questions to fulfill this objective:

What is the best way to make a reliable and valid green banking index for a dual-banking system?

What fundamental dimensions and indicators most effectively encapsulate green banking practices within Islamic and conventional banks?

How much do Islamic and conventional banks differ in their sustainability performance when using a paradigm-neutral index to measure it?

What institutional, regulatory, and ethical factors elucidate the observed disparities in green banking practices?

The study utilizes a sequential explanatory mixed-methods design, integrating qualitative indicator development with stringent quantitative validation to guarantee contextual relevance and psychometric integrity. It brings together Stakeholder Theory, the Triple Bottom Line framework, and Maqasid al-Shariah to show how complex sustainability governance is in pluralistic financial systems.

This research presents three principal contributions. First, it pushes the field of sustainable finance forward by putting Islamic ethical principles into practice within a formal framework for measuring sustainability. This goes against the universalist ideas that are at the heart of most ESG models. Second, it adds to the methodology by creating a rigorously validated index that goes beyond disclosure-based methods for evaluating green banking. Third, it is useful for regulators and professionals because it gives them a way to compare, design policies, and make strategic decisions in emerging economies that are vulnerable to climate change.

This study integrates ethical governance with instrumental sustainability practices, framing green banking as a multifaceted governance process influenced by institutional logics, regulatory pressures, and moral obligations—an insight crucial for the successful expansion of sustainable finance in dual-banking systems.

Literature Review

Green Banking in Conventional Finance: From CSR to Strategic Risk Governance

The idea of green banking in traditional finance has changed a lot in the last twenty years. At first, banks' environmental engagement was seen as an extension of corporate social responsibility (CSR). It was mostly voluntary and based on reputation, with a focus on charitable projects and symbolic commitments (Jeucken, 2010). But the rise in climate-related financial risks has changed sustainability from something that banks could choose to do to something that is now a key part of their strategy and governance for financial stability.

Modern literature primarily conceptualizes green banking through a risk-management perspective, wherein environmental factors are regarded as financially significant risks. These encompass physical risks stemming from climate-induced disasters, transition risks related to regulatory and technological shifts towards low-carbon economies, and liability risks associated with environmental litigation and stranded assets (Battiston et al., 2024). The Task Force on Climate-related Financial Disclosures (TCFD) made this view official by including climate risk in governance, strategy, risk management, and performance metrics. These were then added to ISSB standards. Empirical evidence consistently indicates that banks with greater exposure to carbon-intensive assets encounter heightened credit risk, diminished asset quality, and increased capital volatility (Dietz et al., 2020).

Along with the risk perspective, there is the value-creation view, which sees sustainability as a strategic chance instead of a regulatory burden. Research based on this viewpoint contends that green financial products—such as green bonds, sustainability-linked loans, and renewable energy financing—augment long-term corporate value by diminishing capital expenses, bolstering stakeholder confidence, and promoting innovation (Flammer, 2021). Meta-analyses indicate favorable correlations between sustainability performance and financial returns, especially in institutions functioning within stringent regulatory frameworks (Friede et al., 2015).

The conventional green banking literature, despite its analytical rigor, has faced criticism for its instrumentalist perspective. The adoption of sustainability is frequently dependent on external influences—such as regulation, investor activism, or market incentives—rather than an inherent ethical commitment (Weber, 2015). Consequently, green banking may regress into compliance-oriented disclosure practices or "greenwashing," especially in environments with constrained enforcement capabilities. This limitation becomes more pronounced when conventional frameworks are applied to financial systems governed by alternative normative logics.

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Islamic Finance and Environmental Stewardship: A Normative Paradigm

Islamic finance, on the other hand, includes environmental responsibility in its religious and moral foundations. Sustainability is not viewed as a reaction to regulatory pressure or market incentives, but rather as a moral imperative rooted in Shariah principles. Fundamental Islamic principles—*khilafah* (human stewardship), *amanah* (trusteeship), *adl* (justice), and *maslahah* (public welfare)—form a normative framework wherein environmental protection is essential to economic activity (Dusuki & Abdullah, 2007).

The Maqasid al-Shariah framework organizes these moral imperatives by putting the protection of life (*nafs*), wealth (*mal*), intellect (*aql*), and future generations (*nasl*) at the top of the list. Modern scholars assert that environmental degradation represents *fasad fil-ard* (corruption on earth), framing ecological harm as a transgression of Shariah objectives (Abu Bakar & Abd Ghafar, 2023). In this framework, sustainability goes beyond just managing risks and becomes a fundamental part of governance, affecting how investments are screened, products are structured, and decisions are made at the board level.

Empirical research from Malaysia and Gulf Cooperation Council (GCC) nations indicates that Islamic banks frequently excel over traditional counterparts in governance-related ESG aspects, attributable to Shariah board supervision and ethical screening processes (Miskam et al., 2024). Nonetheless, this normative strength does not invariably result in enhanced environmental disclosure or product innovation. Studies show that Islamic banks often put following rules like *riba* and *gharar* ahead of doing systematic environmental risk assessments. This leads to broken sustainability practices and separate reporting structures (Hussain & Bhutta, 2024).

So, even though Islamic finance has a strong moral basis for sustainability, it is still not being used consistently. This is especially true because there are no standardized measurement tools that go beyond traditional disclosure metrics to show how ethics are being integrated.

Dual-Banking Systems and Measurement Asymmetry

Dual-banking systems, characterized by the coexistence of Islamic and conventional banks within a unified regulatory framework, offer a distinctive institutional setting for the analysis of sustainability governance. Current research underscores structural tensions stemming from the coexistence of divergent paradigms: Islamic banks function under Shariah governance in conjunction with conventional prudential regulation, whereas conventional banks predominantly depend on market-based sustainability incentives (Khan & Zahid, 2024).

In these kinds of systems, using universal ESG and green banking indices creates a lot of measurement asymmetry. These indices put standardized disclosure, carbon metrics, and market-based instruments at the top of the list. They systematically undervalue sustainability that comes from ethical governance and exclusionary screening mechanisms. Empirical evidence from Pakistan and other emerging

economies indicates that Islamic banks frequently receive lower ESG ratings, despite their exclusion of environmentally detrimental sectors via Shariah compliance. In contrast, conventional banks attain higher scores through sophisticated reporting practices, albeit without profound ethical integration. (Ali & Kanwal, 2023)

This imbalance has significant consequences. Regulators have a hard time fairly comparing sustainability performance, investors get misleading signals about ethical quality, and chances for cross-paradigm learning are lost. Furthermore, disclosure-driven indices may encourage symbolic compliance over meaningful environmental engagement, especially in climate-sensitive emerging economies where regulatory enforcement is developing.

Theoretical Foundations for Integrated Measurement

To deal with these problems, we need a theoretical approach to measuring green banking that brings together different ideas. Stakeholder Theory serves as a basis for assessing banks' accountability to various stakeholders, such as regulators, communities, and the natural environment (Freeman, 1984). The Triple Bottom Line framework enhances this viewpoint by highlighting the interconnectedness of economic, environmental, and social performance (Elkington, 1997).

Nevertheless, neither framework comprehensively encompasses the normative and ethical dimensions integral to Islamic finance. The incorporation of Maqasid al-Shariah introduces an auxiliary ethical framework that underscores stewardship, justice, and intergenerational accountability. Recent academic research posits that the integration of these theoretical frameworks facilitates a more thorough comprehension of sustainability governance within pluralistic financial systems (Miskam et al., 2024). Despite theoretical acknowledgment of this complementarity, empirical research seldom translates such integration into quantifiable constructs. Current indices either remain exclusively instrumental or regard Islamic ethics as marginal qualitative narratives instead of essential evaluative criteria.

Synthesis and Research Gap

In summary, the literature shows three major problems. First, traditional, disclosure-focused frameworks still dominate green banking research, which doesn't do a good job of capturing ethical governance. Second, Islamic finance scholarship provides substantial normative insights yet is deficient in empirically validated measurement tools. Third, dual-banking systems, especially in emerging economies that are vulnerable to climate change, are still not well studied in research on measuring sustainability.

These deficiencies highlight the necessity for a contextually relevant, theoretically sound, and psychometrically valid measurement framework that can fairly evaluate green banking practices across various paradigms. This study addresses this necessity by creating and validating the Green Banking Practices Index (GBPI), which combines traditional sustainability metrics with ethical aspects based on Maqasid al-Shariah. This action propels the advancement of both theoretical frameworks and practical applications in sustainable finance research.

Methodology

Research Design and Philosophical Orientation

This research employs a sequential explanatory mixed-methods design (QUAL → QUANT), aligning with established standards in index development and validation studies. The design facilitates the amalgamation of qualitative depth and quantitative precision, permitting the development of context-specific indicators succeeded by empirical validation and comparative analysis (Creswell & Plano Clark, 2018). The methodology is especially appropriate for dual-banking systems, where sustainability practices are influenced by diverse institutional and ethical frameworks.

The study is based on a pragmatic research paradigm that values problem-oriented inquiry more than strictly following positivist or interpretivist traditions. Pragmatism enables the synthesis of normative insights from Islamic ethical theory with empirically verifiable sustainability practices, promoting cross-paradigm comparability without favoring a singular ontological stance.

Phase I: Qualitative Development of GBPI Indicators

Document Analysis

Phase I began with a systematic qualitative content analysis of 200 corporate documents published from 2019 to 2023 by 30 commercial banks in Pakistan (15 Islamic and 15 conventional). The sample encompasses the entire population of SBP-licensed banks that fulfill the subsequent criteria:

continuous operation during the study period, (2) public availability of sustainability-related disclosures, and (3) material asset size within the national banking system.

There were annual reports, sustainability or ESG reports, environmental and social risk management (ESRM) policies, and Shariah compliance reports. To make sure that institutions could be compared, microfinance institutions and foreign bank branches were left out.

All documents were brought into NVivo 14 and coded using a method called iterative thematic analysis. The initial open coding produced more than 150 codes, which were subsequently refined through axial coding and constant comparison into conceptually coherent categories. A second researcher independently coded a 20% subsample to check the reliability of the coding. The Cohen's κ value of 0.82 was higher than the recommended levels. Thematic saturation was reached before the full dataset was finished.

Expert Interviews

To augment document analysis and obtain practice-level insights, semi-structured interviews were conducted with 21 experts chosen through purposive sampling. There were 8 senior bank managers, 5 Shariah scholars, 4 central bank regulators, and 4 sustainability consultants who took part. To be eligible, applicants had to have at least ten years of work experience and be familiar with issues of sustainability or governance in the banking industry.

The interviews lasted between 45 and 75 minutes and followed a set of rules that looked at things like material green banking practices, institutional drivers and barriers, paradigm-specific differences, and measurement challenges. Interviews were recorded, transcribed word for word, and then analyzed in NVivo using a mix of deductive and inductive methods based on Braun and Clarke's (2006) six-phase framework. Member checking improved credibility, with 85% of participants verifying interpretive accuracy.

Indicator Refinement and Delphi Validation

Results from document analysis and interviews were amalgamated to generate an initial repository of more than 50 prospective indicators. Regulators, academics, practitioners, and Shariah specialists made up an independent panel of seven experts who worked together in a modified Delphi process to improve these indicators.

Panelists used a five-point scale to rate indicators on how relevant, clear, and measurable they were over two rounds of Delphi. Indicators that met the set thresholds (mean ≥ 4.0 ; item-level content validity index ≥ 0.86) were kept. At the end of this process, there were 28 indicators that were grouped into four dimensions: Green Financing and Environmental Risk Governance, (2) Operational Eco-Efficiency, (3) Stakeholder Disclosure and Communication, and (4) Strategic Policy and Ethical Integration.

We used a 0–3 ordinal scoring system to operationalize each indicator. The scores ranged from no evidence to full implementation with verification.

Phase II: Quantitative Validation and Application

Content Validity and Scoring Procedures

An independent expert panel evaluated content validity, yielding a scale-level content validity index (S-CVI/Ave) of 0.94, signifying exceptional content adequacy. Two trained coders used a standard scoring manual to score all of the documents separately. Inter-coder reliability, evaluated on a 20% subsample, produced a Cohen's κ of 0.89. Discrepancies were reconciled via consensus discussion.

Reliability and Construct Validity

We used Cronbach's alpha to check for internal consistency reliability. The overall coefficient was 0.91, and the values for each dimension were higher than what is usually accepted. Exploratory factor analysis (EFA) with principal component extraction and varimax rotation was used to look at construct validity. We found that the sample size was good (KMO = 0.87) and that Bartlett's test of sphericity was significant ($p < 0.001$).

The EFA validated a four-factor structure aligned with the theoretical framework, accounting for 76.8% of the total variance. All of the indicators that were kept loaded strongly on their own factors, and there were no cross-loadings that were a problem.

Weighting and Index Construction

The Analytic Hierarchy Process (AHP) was used to get dimension weights by comparing experts in pairs. The final weights—35% for environmental risk governance and financing, 20% for operational eco-efficiency, 25% for disclosure, and 20% for ethical integration—showed good consistency (CR = 0.07).

We calculated the composite Green Banking Practices Index (GBPI) score for each bank by taking a weighted sum of the standardized indicator scores. This score was then put on a scale from 0 to 100 to make it easier to understand and compare.

Analytical Strategy

A comparative analysis of Islamic and conventional banks was performed using independent-samples t-tests, subsequent to the validation of normality and homogeneity of variance assumptions. Cohen's d was used to figure out effect sizes and see if they were practically important. Qualitative findings were incorporated during the interpretation phase to elucidate observed quantitative trends, thereby augmenting analytical depth through triangulation. SPSS 28 was used for all quantitative analyses, and NVivo 14 was used for all qualitative analyses.

Ethical Considerations and Research Rigor

The appropriate institutional review authority gave its ethical approval. All interview participants provided informed consent, and confidentiality was maintained through anonymization and secure data storage. Triangulation, coder training, audit trails, and sensitivity analyses were all used to make sure that the methods were strict and to reduce any possible bias.

Results and Discussion

Structure and Psychometric Properties of the GBPI

The final Green Banking Practices Index (GBPI) has 28 indicators that are spread out over four theoretical dimensions: (1) Environmental Risk Governance and Green Financing, (2) Operational Eco-Efficiency, (3) Stakeholder Disclosure and Communication, and (4) Strategic Policy and Ethical Integration. Exploratory factor analysis shows that this structure is strong, with four factors explaining 76.8% of the total variance, which is higher than the usual thresholds for construct adequacy. All indicators show strong factor loadings and very little cross-loading, which supports clear dimensional separation.

Reliability analysis confirms internal consistency, yielding an overall Cronbach's alpha of 0.91 and dimension-level coefficients between 0.85 and 0.92. These results validate that the GBPI is a psychometrically robust instrument designed to measure multidimensional green banking practices across diverse banking paradigms. The validated structure supports the integration of instrumental sustainability constructs (risk governance, operations, disclosure) with normative ethical governance from a theoretical point of view. This creates a "bilingual" sustainability framework that works for dual-banking systems.

Comparative Sustainability Performance Across Banking Paradigms

An analysis of composite GBPI scores shows that there is no statistically significant difference in overall sustainability performance between Islamic and conventional banks. This convergence indicates that, when assessed through a paradigm-neutral framework, both banking models yield similar overall sustainability results. This finding contradicts the assumptions present in traditional ESG literature that implicitly link enhanced sustainability performance with disclosure intensity or market-driven green product development.

However, at the dimension level, there are big differences that show different ways that sustainability is put into action. Islamic banks significantly outperform conventional banks in Strategic Policy and Ethical Integration due to stronger board-level commitment, embedded stewardship mandates, and alignment between sustainability objectives and core governance structures. This outcome aligns with the Maqasid al-Shariah theory, which views environmental responsibility as an inherent ethical duty rather than an externally enforced obligation.

On the other hand, traditional banks do much better in Stakeholder Disclosure and Communication. This shows that they have adopted internationally standardized reporting frameworks more fully. This is in line with stakeholder theory and the instrumental logic of traditional finance, which says that openness is a way to gain legitimacy, build investor trust, and follow the rules. Nonetheless, the prevalence of disclosure-oriented performance engenders apprehensions about the profundity and substantive incorporation of sustainability practices, especially in the absence of aligned ethical governance frameworks.

The differences in Environmental Risk Governance and Green Financing are small, but they favor Islamic banks. This suggests that exclusionary screening and ethical investment restrictions may indirectly improve environmental risk profiles. On the other hand, there are no statistically significant differences in Operational Eco-Efficiency, which suggests that internal environmental management practices are becoming more similar across paradigms. This is probably due to the standardization of regulations and the spread of technology.

Institutional Drivers and Mechanisms: Qualitative Insights

Qualitative evidence derived from expert interviews offers essential understanding of the mechanisms that drive these quantitative trends. People who work for Islamic banks always talk about how Shariah governance affects sustainability practices. They see environmental screening as an important part of their fiduciary duty. In this context, sustainability is integrated upstream into decision-making processes instead of being added through post hoc disclosure.

In contrast, respondents from traditional banks often ascribe sustainability initiatives to regulatory compliance and reputational factors. This regulatory-driven model has enhanced transparency and reporting quality; however, it seems less effective in cultivating profound organizational commitment to environmental stewardship. These results support previous criticisms of instrumental sustainability adoption and show

how limited compliance-driven methods are at bringing about real changes in the environment.

From the standpoint of institutional theory, the findings demonstrate isomorphic convergence in outcomes coupled with divergence in foundational logics. Regulatory coercion fosters convergence in operational practices, whereas normative and ethical pressures maintain differentiation in governance structures. The GBPI effectively encapsulates this duality, illustrating its function as a diagnostic tool rather than merely a ranking instrument.

Theoretical Implications

The results make a number of important theoretical contributions. First, they enhance the sustainable finance literature by empirically illustrating that diverse philosophical paradigms can produce convergent sustainability outcomes when evaluated through a comprehensive measurement framework. This backs up the idea that sustainability governance can take many forms, which goes against the idea that universalist ESG models are the best.

Second, the strong performance of Islamic banks in ethical integration supports the idea that sustainability assessments should include normative aspects instead of just focusing on disclosure metrics. The GBPI enhances the comprehension of sustainability governance in pluralistic financial systems by integrating Maqasid al-Shariah with stakeholder and triple bottom line theories.

Third, the results show that treating sustainability as just a way to get things done or improve your reputation has its limits. Even though traditional banks are very open, the lack of built-in ethical governance makes people wonder how long and how real their sustainability promises are, especially when enforcement is weak.

Practical and Policy Implications

From a regulatory standpoint, the findings indicate that uniform disclosure requirements alone are inadequate to reflect significant sustainability performance in dual-banking systems. Regulators could gain advantages from utilizing multidimensional benchmarking tools, like the GBPI, that differentiate between symbolic compliance and embedded governance.

The results show that there are chances for cross-paradigm learning for practitioners. Islamic banks could have a bigger impact on sustainability if they improved their disclosure practices to make it easier for stakeholders to talk to each other. Conventional banks could make sustainability a bigger part of their business by making board-level stewardship mechanisms a permanent part of their business. Hybrid governance models that combine ethical integration with advanced reporting may be the best way to make green finance bigger.

Synthesis

The combined results show that sustainability performance in banking is not the same for everyone. Instead, it depends on how regulatory pressure, institutional logic, and ethical orientation work together. The GBPI captures this complexity by showing that

outcomes are converging while governance mechanisms are diverging. By doing this, it changes the way we think about green banking from a single compliance outcome to a multidimensional governance process. This gives us both theoretical and practical help for developing sustainable finance in dual-banking systems.

Conclusion

This research formulates and empirically substantiates a Green Banking Practices Index (GBPI) intended to fairly evaluate sustainability performance in dual-banking systems. The GBPI overcomes a major flaw in current ESG and green banking frameworks by combining traditional sustainability benchmarks with ethical and governance aspects from Maqasid al-Shariah. This is because Islamic finance has normative foundations that these frameworks don't take into account. The results show that when sustainability is measured using a context-sensitive and theoretically inclusive framework, Islamic and conventional banks perform similarly overall, even though they follow very different institutional and ethical paths.

At a disaggregated level, the results show that there are important differences in how sustainability is put into action. Islamic banks have a clear edge when it comes to integrating ethics and policies. This is because Shariah governance structures place a strong emphasis on stewardship and public welfare. Conventional banks, on the other hand, are more open and honest, which is in line with sustainability models that focus on compliance and usefulness. These complementary strengths highlight that sustainability outcomes are not exclusively determined by market-based incentives or regulatory compliance; rather, they are profoundly influenced by foundational governance logics.

Theoretically, this study enhances sustainable finance scholarship by contesting the universalist approach of prevailing ESG measurement instruments. By implementing Maqasid al-Shariah in conjunction with stakeholder and triple bottom line frameworks, it illustrates the practicality and significance of incorporating normative ethical principles into empirical sustainability evaluation. This study reconceptualizes green banking as a multidimensional governance process instead of a uniform compliance result, thereby broadening sustainability theory within diverse financial systems.

From a policy and management standpoint, the GBPI provides regulators and practitioners with a diagnostic tool that can differentiate between symbolic adoption and ingrained sustainability practices. For regulators who work in dual-banking situations, the index gives them a way to do more detailed benchmarking, design incentives, and evaluate supervisors. The findings reveal opportunities for cross-paradigm learning within banking institutions, indicating that hybrid governance models—merging ethical integration with comprehensive disclosure—could be most effective in expanding green finance, especially in climate-vulnerable emerging economies.

The study is based in Pakistan, but its findings are relevant to other places where different types of banks operate under the same rules. As climate risk escalates and sustainability regulations become more stringent, measurement frameworks that acknowledge both instrumental and normative aspects will become increasingly vital.

This study enhances the role of banking systems as credible and effective agents of sustainable development by offering a validated, theoretically grounded, and adaptable tool.

Limitations and Future Research

This study has a number of limitations that should be recognized, and it also suggests areas for further research. The analysis is based mostly on corporate documents that are available to the public. These documents may not fully show how deep or effective the actual implementation was. Even though strict coding rules and triangulation were used, data based on disclosure are still vulnerable to symbolic reporting and social desirability bias. Subsequent research could enhance validity by integrating on-site audits, regulatory inspection data, or internal operational metrics to accurately reflect substantial sustainability practices.

Second, the study uses a cross-sectional design, which makes it hard to figure out if there are causal relationships or to look at how green banking practices change over time. Longitudinal research monitoring GBPI scores throughout regulatory cycles would facilitate the evaluation of the evolution of sustainability performance in response to policy reforms, climate disruptions, or changes in market incentives. These designs may also enable causal modeling between sustainability governance and financial results.

Third, the GBPI combines ethical and practical aspects, but it does not directly measure the financial performance or risk outcomes of green banking practices. Future research may expand the framework by investigating the correlation between GBPI scores and indicators such as profitability, asset quality, capital adequacy, or resilience to climate-related shocks, thereby deepening the comprehension of the financial significance of embedded sustainability.

Fourth, the empirical context is restricted to Pakistan's dual-banking system, potentially limiting generalizability to jurisdictions with varying regulatory frameworks or degrees of Islamic finance integration. Comparative cross-country studies utilizing the GBPI in other dual-banking contexts—such as Malaysia, Indonesia, or the Gulf Cooperation Council—would facilitate the evaluation of the index's external validity and the universality of its theoretical foundations.

Lastly, future studies could improve and broaden the GBPI by using more advanced analytical methods, such as confirmatory factor analysis, structural equation modeling, or machine learning, to see how relevant indicators are and how sensitive weighting is. These additions would make the index even stronger and better able to adapt to changing standards for sustainability.

When combined, these paths provide chances to enhance theoretical understanding, increase measurement accuracy, and fortify the empirical basis of sustainable finance research within pluralistic banking systems.

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