



The Role of Sustainable Investment in Improving Pakistan's Economic and Financial Performance: A Critical Secondary Qualitative Review

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ABSTRACT

Pakistan is experiencing a challenging policy choice: low capital formation, frequent external financing stresses, sensitivity to climate shocks, and an energy system constrained by imported fuels and circular debt. Sustainable investment is being sold as a pathway to mitigating these issues concurrently, but the supporting body of evidence is rather conditional than the promotion stories put forth. This study critically analyzes the impact of sustainable investment on the economic and financial performance of Pakistan based on a secondary qualitative review of 30 contemporary peer-reviewed and institutional sources published in the last three years (between 2020 and 2026). This was hauled together thematically through five channels: macroeconomic resilience and productivity, financial sector stability, capital market development, energy security and external balance, and institutional and distributional effects. The review concludes that sustainable investment can increase productive capacity, decrease climate-related loss, enhance risk pricing, widen long-term financing instruments, and decrease exposure to imported power turbulence. However, these gains are not automatic. The low rate of investment, shallow capital markets, nexus between sovereign and banks, ineffective project-preparation mechanisms, lack of consistent policy signals, dim sustainability indicators, and financial preparation pipeline are impeding additionality in Pakistan and may allow greenwashing or piling of debt without change. The article asserts that sustainable investment should be discussed as a disciplined capital-allocation model and not as a specified type of funding. Its contribution to economic and financial performance relies on credible taxonomy-based disclosure, independent assurance, climate risk oversight, bankable project development, local currency instruments, and just transition protective measures. The paper ends with a sequenced policy agenda and provides priorities for causal research based on Pakistani firm, bank, project, and household data.



1. Introduction

Various factors that limit Pakistan's development model include low investment, a narrow export base, frequent external stress, lack of infrastructure, and extreme climate susceptibility. Unpredictable changes destroy productive factors and undermine fiscal space, and unstable energy decreases competitiveness. Macroeconomic instability also prevents the patient capital needed to adapt to clean energy, efficient infrastructure, and cleaner production. Thus, sustainable investment is relevant as a mechanism for transforming the quality and risk profile of capital formation.

According to the Economic Survey 2025-26 by Pakistan, the real growth of GDP is recorded to be 3.7 percent, but the gross investment is 14.38 percent of the gross domestic product, national savings is 14.13 percent, and net foreign direct investment is approximately US\$1.4 billion (Finance Division, 2026). Their challenge is to mobilise additional capital and enhance their resiliency, productivity, and capacity to earn foreign exchange. The nationally determined contribution estimates investment needs of approximately US\$565.7 billion in 2035 in Pakistan, compared to earlier estimates of about US\$348 billion of climate-resilient and low-carbon development reflecting investment requirements to 2030 on a different scope and base (Government of Pakistan, 2025a; World Bank, 2022). Thus, the financing gap is macroeconomically significant.

New reforms have resulted in a more believable architecture. In Pakistan, there are a National Adaptation Plan, National Climate Finance Strategy, current NDC, green taxonomy, climate stress-testing guidance, and ESG disclosure guidelines (Ministry of Climate Change and Environmental Coordination [MoCCEC], 2023, 2024; Government of Pakistan, 2025a, 2025b; Securities and Exchange Commission of Pakistan [SECP], 2024; State Bank of Pakistan [SBP], 2025a). The initial green sukuk issued domestically as sovereign debt in 2025 and the Resilience and Sustainability Facility backed by the International Monetary Fund (IMF) also shows a change of focus on policy statements to financing instruments and macro-critical climate reform (IMF, 2025, 2026). However, a policy framework cannot be equated to either investment additionality or performance that can be measured.

The research question of this study is as follows: In what ways and under what circumstances can sustainable investment enhance the economic and financial performance of Pakistan? It unifies firm-level evidence with the Pakistan macro-institutional environment, separates correlation and risk repricing, and additionality on the real-economy, and develops a conditional argument: performance declines only when there is firm-level productivity, transparent risks, sustainable financing, and widespread benefits.

2. Conceptual and Empirical Background

Sustainable investment commits resources and deals with material ESG risks or delivers verifiable sustainability impacts. Risk-management theory predicts reduced operational, regulation, and reputation shocks; resource-efficiency theory associates the increase in energy, water, and governance with improvements in productivity; and investor-preference model indicates that demand of green assets can impact the expected returns and cost of financing even when the cash flows are similar (Pástor et al., 2021; Pedersen et al., 2021).

The empirical literature generally supports a positive or non-negative relationship between sustainability and financial performance; however, it does not support deterministic arguments. Atz et al. (2023) discovered that most of the analysed evidence is neutral or positive, whereas Aydoğmuş et al. (2022) presented relationships between ESG performance, profitability, and firm

value. Carbon-intensive companies are also prone to a quantifiable risk premium, suggesting that investors value transition exposure (Bolton and Kacperczyk, 2021, 2023). Institutional investors view climate risk as financially material and disclosure as value-sensitive and useful for making valuations (Ilhan et al., 2023; Krueger et al., 2020).

However, the evidence for resilience is ambivalent. Strong environmental and social descriptions were found to be related to superior stock market resilience in times of COVID-19-shock, as shown by Albuquerque et al. (2020) and Broadstock et al. (2021). Conversely, Bae et al. (2021) did not observe overall crisis safeguarding in terms of pre-existing corporate social responsibility ratings and cautioned that investors do not expand preservative behaviour to a low price talk. For Pakistan, this means what it says: poor economics or leadership cannot be fixed with mere labels. Credible use of proceeds and monitoring are also necessary for green-bond benefits (Flammer, 2021). Sustainable finance must be measured in terms of more investment, less risk, and practical results, not in terms of issuance or disclosure.

3. Methodology

The research design of this study is a secondary qualitative research design based on a structured critical review. Publisher databases, scholarly search engines, and official repositories were used to identify the sources. The searches completed in July 2026 consisted of a combination of terms, such as sustainable investment, ESG financial performance, climate finance Pakistan, green banking, green bonds, climate risk disclosure, and financial stability.

The ultimate corpus of the sources includes 30 articles published not earlier than 2020-2026: peer-reviewed studies on finance and sustainability, sources focused on Pakistan alone, and official policy/diagnostic reports. The inclusion criteria were such that sources connected sustainability with firm or bank performance, climate risk and pricing, green instruments and mobilisation, or institutions and macro constraints in Pakistan. Opinion articles, duplicates, descriptive commentaries, and articles that could not be recognised by means or provenance were excluded.

Abductive thematic synthesis was used. The original deductive codes were based on the research question which was growth, productivity, stability, cost of capital, capital mobilisation, external balance, and inclusion. This was followed by inductive coding, which revealed recurring enabling conditions and failure modes. The appraisal of evidence was based on the authority of the source, research design, geographic transferability, strength of cause, and applicability of the research to Pakistan. There were five themes: macroeconomic resilience and productive transformation, financial sector stability, capital market development, energy security and industrial competitiveness, and institutional and distributional constraints.

It is a process that allows conceptual combination but presents weaknesses. ESG indicators vary by provider, there is limited evidence of ESG by country, and the evidence available is often associative across the spectrum of Pakistan. The analysis thus results in mechanisms and boundary conditions instead of a causal national impact. Official funding needs are viewed as planning estimates with varying scopes and horizons.

4. Findings and Critical Discussion

4.1 Macroeconomic resilience and productive transformation

This is because the economic rationale for sustainable investment in Pakistan focuses on productivity-based capital formation at the cost of avoiding loss. Climate-resilient irrigation, transport, buildings, health systems, and drainage can ensure the protection of output and public

assets, clean technologies can minimise resource intensity, and ecosystem restoration can help sustain rural livelihoods. In this sense, resilience investment is not a consumption premium; it merely maintains the capital base and minimises fluctuations in growth, fiscal revenue, and household income (World Bank, 2022).

Again, avoided losses are hard to monetise, especially when it comes to adaptation projects that create public or dispersed benefits. The Asian Development Bank (2023) demonstrates that climate finance in Asia is largely focused on mitigation and energy, with a significant proportion dedicated to adaptation practices despite large requirements. This is the same bankability bias observed in Pakistan. Contractual cash flow can be achieved through solar generation, but the necessary services, such as flood protection, heat-health systems, or climate information services, usually rely on government budgets. This makes the portfolio lean more towards bankable mitigation than interventions with the highest returns of social resilience.

The low ratio of investment in Pakistan leads to the second qualification. The rebranding of current spending as green does not raise productive capacity. Sustainable finance enhances growth solely in cases where it mobilises more capital, accelerates viable projects, or increases the quality of spending. In its NDC Investment Plan, the UNDP cites policy uncertainty, ineffective institutional coordination, inadequate project preparation, and lack of domestic capital as limitations to private climate investment (United Nations Development Programme [UNDP], 2024). These frailties may create a pipeline paradox, that is, there are big headline requirements but insufficient projects that are investment-ready.

Depreciation composition is another issue. When revenues are in rupees, foreign-currency climate debt may stress balance sheets. Market-rate sovereign borrowing is therefore not desirable for numerous interventions compared to concessional finance, grants, guarantees, and risk sharing. The IMF's Resilience and Sustainability Facility can extend maturity and facilitate reform, but it cannot replace domestic revenue, project governance, and the mobilisation of private capital (IMF, 2025, 2026). Sustainable investment lowers the costs of the lifecycle and the future; it might be sustainable where it increases the debt service without creating productive and foreign-exchange-generating assets.

4.2 Financial-sector stability and intermediation

The risk of climate exposure in the financial system of Pakistan is manifested in the form of defaults, collateral damages, sector concentration, insurance gaps, and transition-sensitive assets in the agricultural sector, textiles, energy, transport, construction, and small enterprises. The introduction of climate risk into credit evaluation can enhance loan pricing, portfolio diversification, provision, and capital resource planning. The climate stress-testing guidance of the SBP is a significant move to voluntary green banking for prudential analysis (SBP, 2025a).

This approach has been found to be effective by international evidence. Investor decisions and asset prices are susceptible to climate risks, and disclosures can curb information asymmetry (Giglio et al., 2021; Ilhan et al., 2023; Krueger et al., 2020). Evidence from the MENAT Bank indicates that there is no linear relationship between ESG and performance; there can be benefits only when institutions exceed capabilities and investment limits, and preliminary costs of compliance can depress returns (El Khoury et al., 2023). One study done in Pakistan demonstrates that there is a positive linkage between sustainable finance practices and listed commercial-bank stability, but given the small sample and an observational design, it cannot be concluded that ESG resulted in better stability (Nazir et al., 2024).

The key threat is that climate oversight can be transformed into a reporting exercise that is not linked to decisions on lending. Bank sovereign exposure in Pakistan Banks in Pakistan are highly exposed to sovereign risks and have worked in an environment where the macroeconomic environment is biased towards the people and other issues that have short-term government securities as opposed to those with a long-term environment. Climate regulations could result in better disclosure but not substantial redirection of credit unless risk-sharing and project pipelines improve. The risk of mechanical green supporting factors that reduce regulatory capital, showing no signs of reduced default risk, is also present. Prudential policy should be risk-based: brown assets can be undervalued, but that does not necessarily make green assets riskless.

A plausible strategy is the combination of scenario analysis and loan-level information, sector conversion sequence, and supervisory examination. Banks are supposed to report not only green-loan volumes but also additionality, maturity, pricing, defaults, emissions or resilience results, and exposure to taxonomy-ineligible activities. This would help draw a line between real portfolio transition and relabelling, as well as enable regulators to determine whether sustainable lending would lead to better environmental and financial resilience.

4.3 Capital-market development, investor confidence, and cost of capital

Capital markets can be enhanced with sustainable investments from long-term pension funds, insurance companies, Islamic investors, developmental institutions, and international mandates. Green sukuk tend to be the most suitable asset-based financing for the Pakistani Islamic finance ecosystem. A benchmark was set by the 2025 sovereign green sukuk, and the framework of the Pakistan Green Taxonomy and ESG disclosure can enhance comparability and decrease due diligence costs (Government of Pakistan, 2025b; PSX, 2025; SBP, 2025b; SECP, 2024).

Plausible sustainability attributes widen the investor pool and occasionally decrease the cost of financing (Pástor et al., 2021). Governance can also be enhanced by labelled bonds characterised by specified proceeds and reporting; corporate green bonds have been linked to positive environmental performance and long-term ownership (Flammer, 2021). However, sustainable finance in emerging markets is limited by small issue sizes, poor data, exchange risk, lack of liquidity, and high verification costs (Goel et al., 2022).

In the case of Pakistan, the focus should not be on the greenium. A small-scale label effect is likely to be dominated by sovereign risk, expectation of inflation, currency volatility, taxation, and liquidity on the market. A low coupon is also not evidence of an improved social outcome; it can be evidence of scarcity, guarantees, or the quality of the issuer. Furthermore, assets that would otherwise be constructed without any environmental effect can be financed by use-of-proceeds bonds, thus creating no environmental impact. The ordeal or bonds of the sustainability-linked instruments result in a different risk: when targets are weak or easily attained, penalties become immaterial.

Credibility can be enhanced through the taxonomy and gradual implementation of sustainability disclosure but mandatory reporting without certainty may open the door to boilerplate disclosure. The ESG activities of the PSX and the SECP framework provide convenient infrastructure for the market, but the nature of the data will rely on homogeneous metrics, materiality in the sectors, external validation, and regulation. Smaller issuers may incur undue compliance costs. A proportionate Ro regime is necessary that offers a standard template and technical assistance, and with which stronger assurances and transition-plan requirements are applied to systemically important and high-emitting parties.

4.4 Energy security, external balance, and industrial competitiveness

The most obvious medium of linkage between sustainability and the external and industrial performance of Pakistan is through energy investment. The Economic Survey indicates that approximately half of the installed capacity and over half of the electricity generation is produced by hydropower, nuclear, and renewables, with distributed solar growing rapidly (Finance Division, 2026). Ideally, a country can boost domestic renewable production, which will limit reliance on global oil prices, save foreign exchange, enhance supply stability, and enable exports with lower carbon content.

However, capacity shares do not necessarily reduce system costs. Cheap generation can be counterbalanced by grid congestion, lossy transmission, capacity payment, circular debt, inefficient demand forecasting, and contractual rigidity. Fast-net-metered solar can drive down the demand by more-valued customers and leave fixed network costs to be paid on a smaller base, causing distributional and fiscal strains. Furthermore, improved external balance in the future would enable imported solar panels, batteries, and equipment to initially increase the level of imports, although because of lifecycle fuel savings.

Sustainable industrial investment must not be limited to generation of grids, storage, efficiency, electrified transport, industrial heat, water productivity, waste recovery, and export traceability. Resource efficiency and verifiable emissions information are becoming of greater interest to textiles and other exports to destination markets due to carbon pricing and border measures. Nevertheless, coercing the world to act fast without low-cost finance and technology might disfavour small- and medium-scale exporters. The transition policy should rank standards in terms of concessional credit, shared testing, development of suppliers, and reskilling of workers.

4.5 Institutional quality, greenwashing, and distributional risk

The quality of institutions matters. Pakistan's greater policy architecture has yet to cut across fragmented federal, provincial, regulatory, banking, enterprise, and municipal roles. The National Climate Finance Strategy acknowledges that coordination, tracking, and mobilisation of the private sector and international fund access are necessary (MoCCEC, 2024). The National Adaptation Plan also stipulates that implementation should be locally based and not centralised (MoCCEC, 2023).

There are 3 failure modes should be highlighted. Based on this, the first reason greenwashing may occur is that labels are broader than verifiable results or when they are unaudited. Second, green enclaves can make finance serve big energy projects and well-known companies and not adapt to rural communities, women's businesses, or small businesses. Third, unfair transitions may impose an undue burden on less adaptable groups through increased tariffs, job losses, or compliance expenses. Sustainability investment would then enhance the value of selected assets and deteriorate welfare or political durability.

These risks question the fact that ESG scores are proxies for social value. Ratings tend to gauge the impacts on enterprise value but not on society, and aggregation masks trade-offs and disagreement over methods. The contradictory evidence of the crisis in Albuquerque et al. (2020), Broadstock et al. (2021), and Bae et al. (2021) further justifies the separation of credible operational resilience and reputation-based score. Pakistan's structure must then integrate financial materiality and impact indicators that are pertinent to national priorities, such as avoided losses, employment, energy savings, water security, export income, household affordability, and beneficiary allocation.

5. Policy and Research Implications

The discussion supports a programmatic order of activities. First, Pakistan needs to introduce green taxonomy in banking, capital markets, public investment, and budget tagging, and demands sector-specific metrics and independent assurance to large issuers. Disclosure should be internationalised and related to local capacity. The goal is similar to the data of decision use and not lead data.

Second, the focus on preparing projects should be placed on public institutions and development partners. Risk-bearing, climate analysis, guidance, and standard forms of contracts may be financed by a state line installation system. Blended finance should be selectively applied to cover risks that can be identified, as opposed to subsidising projects that are commercially viable. A special case of grants and concessional windows should be saved specifically on what can be adapted and local public goods, where the cash flows of the private sector are weakest.

Third, financial policies must be additive and stable. The SBP incorporates climate scenarios in the supervisory review, enhances borrower- and collateral-level data, and releases aggregate exposure indicators. Incentives must have conditional terms regarding verified new lending, longer-term maturities, and quantifiable results. Guarantees and first-loss structures have the power to crowd into private sector credit, and contingent fiscal liabilities must be publicly disclosed.

Fourth, local-currency green sukuk and bond markets should be intensified in Pakistan. Standards of sovereign regularity, homogeneous structures, external audit, and transparent after-sale allocation and impact registry can minimise transaction costs. Pension funds and insurers need instruments with appropriate duration, liquidity, and credit quality. Local-currency multilateral or currency hedging is needed when revenues are local.

Fifth, transition policies should be fully inclusive. Program design should include SME credit lines, technical assistance, worker reskilling, affordable energy protection, provincial involvement, and locally led adaptation. The reporting of distributional indicators should be provided together with emissions and financing metrics.

Studies must go beyond cross-sectional ESG scores. Priorities encompass bank-loan panel relationships between taxonomy alignment, pricing, and expectations; firm analysis of efficiency, exports, productivity, and the cost of financing; green-sukuk additionality analysis; and household/district studies of benefits to adaptation. Quasi-experimental designs on disclosure requirements, financing programs, floods, and shifts in energy policy should present greater causality than current associations.

6. Conclusion

Pakistan could improve its economic and financial performance through sustainable investment, but this means that it is a conditional, not an automatic process. The greatest plausible advantages include greater resiliency of productive assets, reduced resource and fuel risk, better climate risk management, an expanded range of long-term financing vehicles, and greater investor details. These channels can be particularly important in an economy with low investment, external vulnerability, energy system stress, and substantial climate financing requirements.

The main limitation is the difference between the policy structure and other investable, well-managed projects. Taxonomies, disclosures, green sukuk, and stress tests will help minimise information and coordination failure, but will not fix poor project economics and volatile macroeconomic conditions, lax enforcement, or inequitable and unfair application. New debt,

greenwashing, or distributional harm can be hidden by sustainable labels in the absence of outcome verification.

Thus, sustainable investment should be considered a disciplined capital allocation system in Pakistan. Finances should be evaluated based on productivity, resilience, foreign exchange impact, financial risk, fiscal sustainability, and allocation rather than on colour-coded labels. Sustainable investment can enable a more robust and competitive economy with reliable information, independent assurance, bankable pipelines, local currency instruments, and just-transition protection. Devoid of these foundations, it will be a promising but loosely spread reform.

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