



PUBLIC INVESTMENT POLICIES AND SUSTAINABLE BUSINESS TRANSFORMATION: INTEGRATING GOVERNMENT RETAIL INVESTMENT SCHEMES WITH FINANCIAL INCLUSION AND ORGANISATIONAL SUSTAINABILITY

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ABSTRACT

Background: Public investment policies are increasingly recognised as instruments for driving sustainable business transformation, particularly where access to formal financial systems remains inequitable. Government retail investment schemes—sovereign savings bonds, national investment funds, equity crowdfunding frameworks, and tax-advantaged retail instruments—sit at the nexus of macroeconomic policy and individual financial behaviour, yet no integrative framework connects them to financial inclusion and organisational sustainability. **Objective:** This study investigates how government retail investment schemes mediate the relationship between public investment policies and sustainable business transformation, with financial inclusion and organisational sustainability as moderating and outcome variables. **Methods:** This mixed-methods study integrates a systematic literature review (187 peer-reviewed articles, 2008–2024), cross-sectional survey data from 412 organisations across six economies (India, UK, Brazil, Kenya, Malaysia, Australia), and interviews with 28 senior policymakers and scheme administrators, analysed via structural equation modelling, mediation analysis, and thematic analysis. **Results:** Government retail investment schemes significantly mediate the relationship between public investment policies and sustainable business transformation ($\beta = 0.63$, $p < 0.001$), with financial inclusion strongly moderating this pathway ($\Delta R^2 = 0.18$, $p < 0.01$). Organisational sustainability outcomes are further predicted by scheme accessibility, governance quality, and investor education. Four pathways link policy to organisational transformation: capital deepening, risk democratisation, stakeholder engagement broadening, and ESG behaviour alignment. **Conclusions:** This paper advances an integrative Policy-Inclusion-Sustainability (PIS) framework and offers actionable policy recommendations for governments seeking to harness retail investment schemes for inclusive, sustainable economic transformation, with implications for both developed and emerging economies.

KEYWORDS : Public investment policy; Government retail investment schemes; Financial inclusion; Organisational sustainability; Sustainable business transformation; ESG; Capital markets; Mixed methods; Structural Equation Modelling

1. INTRODUCTION**1.1 Background of the Study**

The intersection of public investment policy, financial inclusion, and organisational sustainability represents one of the most consequential areas of contemporary policy scholarship. As governments worldwide contend with the dual imperatives of stimulating economic growth and addressing deep-rooted inequalities in access to capital, retail investment schemes have emerged as a significant policy instrument with the potential to simultaneously democratise investment, deepen financial markets, and catalyse sustainable transformation in both public and private organisations.

Government retail investment schemes (GRIS) encompass a broad and heterogeneous portfolio of state-sponsored or state-regulated financial instruments designed to mobilise household savings towards productive investment. These include, inter alia, sovereign savings bonds (e.g., India's Sovereign Gold Bonds, the UK's Premium Bonds and National Savings & Investments products), equity-linked savings schemes (e.g., India's ELSS under Section 80C), national pension investment frameworks, government-backed equity crowdfunding platforms, and socially responsible investment (SRI) mandates embedded within public fund structures. In many economies, such schemes serve not merely as fiscal instruments for public debt management, but as deliberate policy tools designed to widen capital market participation, foster a culture of long-term saving, and redirect private capital towards nationally significant sectors including infrastructure, renewable energy, and social enterprise.

1.2 Problem Statement

Notwithstanding the rapid proliferation of government retail investment schemes across both advanced and emerging economies, a specific and consequential problem persists: policymakers, scheme administrators, and organisational leaders currently lack a validated, evidence-based framework for understanding how—and under what conditions—public investment policy translates into sustainable business transformation via retail investment mechanisms.

This problem manifests at three interconnected levels. At the theoretical level, the literatures on public investment policy, financial inclusion, and organisational sustainability have developed largely in isolation, with no integrative model explaining the pathways that connect them (see Section 2.5). At the empirical level, no study to date has tested whether government retail investment schemes function as a mediating mechanism—as opposed to a merely correlated

outcome—in the relationship between public investment policy and organisational sustainability transformation, leaving policymakers without robust evidence to guide scheme-design investment decisions. At the practical policy level, this evidentiary vacuum carries tangible consequences: governments continue to commit substantial fiscal resources to retail investment scheme proliferation without clear guidance on which design features—governance quality, ESG mandate stringency, digital accessibility, financial literacy infrastructure—most effectively convert scheme participation into measurable organisational sustainability outcomes, and without understanding how these effects vary across differing levels of financial inclusion and economic development.

Left unaddressed, this problem carries material risk: absent evidence on the mechanisms and boundary conditions under which GRIS drive sustainability transformation, governments risk designing schemes that maximise capital mobilisation while failing to generate the inclusive, sustainability-oriented economic transformation that underlies their stated policy rationale. This study directly addresses this problem by developing and empirically testing the Policy-Inclusion-Sustainability (PIS) Framework, which explicitly models GRIS as the mediating mechanism connecting public investment policy to sustainable business transformation, conditioned by financial inclusion and moderated by economic development context.

1.3 Research Objectives

Primary Objective: The primary objective of this study is to develop and empirically validate an integrative framework explaining how government retail investment schemes mediate the relationship between public investment policies and sustainable business transformation, conditioned by financial inclusion and economic development context.

Secondary Objectives:

- RO1: To examine the extent to which public investment policy environments influence the design quality and accessibility of government retail investment schemes (addressed under H1).
- RO2: To evaluate the mediating role of government retail investment schemes in transmitting the effects of public investment policy to sustainable business transformation outcomes (addressed under H2).
- RO3: To assess the moderating influence of financial inclusion on the relationship between government retail investment scheme design and sustainable business transformation (addressed under H3).

- RO4: To determine the effect of ESG mandates embedded within government retail investment schemes on organisational sustainability outcomes (addressed under H4).
- RO5: To compare the strength of the public-investment-policy-to-sustainable-transformation pathway across developed and emerging economy contexts (addressed under H5).
- RO6: To translate the empirical findings into actionable policy recommendations for governments seeking to optimise retail investment scheme design for inclusive and sustainable economic transformation.

1.4 Research Questions

Guided by the problem statement and research objectives articulated above, this study is structured around one overarching research question and five supporting sub-questions:

Overarching Research Question: *How, and under what conditions, do government retail investment schemes mediate the relationship between public investment policies and sustainable business transformation?*

- RQ1: To what extent do public investment policies influence the design quality and accessibility of government retail investment schemes?
- RQ2: Do government retail investment schemes significantly mediate the relationship between public investment policies and sustainable business transformation?
- RQ3: How does financial inclusion moderate the relationship between government retail investment scheme design and sustainable business transformation?
- RQ4: What influence do ESG mandates embedded within government retail investment schemes exert on organisational sustainability outcomes?
- RQ5: Does the strength of the public-investment-policy-to-sustainable-transformation pathway vary systematically across developed and emerging economy contexts?

1.5 Significance of the Study

Despite their proliferation, the scholarly literature on GRIS remains fragmented. Research on public investment policy has largely proceeded in isolation from the financial inclusion literature, and both have remained largely disconnected from the emerging field of organisational sustainability and ESG (Environmental, Social, and Governance) management. This siloing of knowledge has produced a significant lacuna, which the Policy-Inclusion-Sustainability (PIS) Framework advanced in this paper is designed to close by positioning GRIS as a critical institutional bridge between state-level public investment policy and the sustainability behaviours of organisations. The framework draws on institutional theory, stakeholder theory, and capital structure theory to hypothesise that the design quality, accessibility, governance architecture, and financial literacy infrastructure of GRIS significantly mediate the policy-to-sustainability transformation pathway, with financial inclusion modelled as a moderating variable whose strength varies systematically across economic development contexts.

Wider relevance: The relevance of this inquiry is underscored by several converging trends. First, the global retail investor base has expanded dramatically: the World Bank (2023) estimates that the number of individuals with access to formal investment products grew by 34% between 2017 and 2022, driven partly by fintech-enabled GRIS platforms and government-mandated inclusion programmes. Second, the UN Sustainable Development Goals (SDGs), particularly SDG 8 (Decent Work and Economic Growth), SDG 10 (Reduced Inequalities), and SDG 17 (Partnerships for the Goals), explicitly frame inclusive investment as a driver of sustainable development. Third, post-pandemic fiscal strategies in both the Global North and Global South have elevated retail investment schemes as instruments for mobilising domestic capital to fund green and social infrastructure, creating an urgent need for evidence on their effectiveness and design optimisation.

1.6 Organisation of the Paper

The remainder of the paper is organised as follows: Section 2 provides a comprehensive review of the theoretical and empirical literature. Section 3 develops the theoretical framework and research hypotheses. Section 4 details the research methodology. Section 5 presents empirical findings. Section 6 discusses findings in relation to theory and policy. Section 7 articulates limitations and directions for future research. Section 8 concludes with recommendations.

2. LITERATURE REVIEW

2.1 Public Investment Policy: Theoretical Foundations and Empirical Evidence

Public investment policy is broadly understood as the deliberate allocation of government resources—financial, regulatory, and institutional—to stimulate capital formation, productivity enhancement, and structural economic transformation (Aschauer, 1989; Barro, 1990). The seminal work of Aschauer (1989) established the positive externalities of public infrastructure investment on private sector productivity, a finding extensively replicated and extended across diverse economic contexts (Calderón & Servén, 2008; Égert et al., 2009).

Contemporary public investment policy theory has, however, evolved beyond the physical infrastructure paradigm. The 'investment policy mix' concept, advanced by Rodrik (2004) and subsequently elaborated by Mazzucato (2013, 2018), positions the state as a risk-taking 'entrepreneurial actor' that co-invests with the private sector in sectors characterised by market failures, long time horizons, or high social externalities. This reconceptualisation is particularly salient in the context of retail investment schemes, where the state assumes roles as regulator, guarantor, co-investor, and financial educator simultaneously.

Empirically, public investment multipliers have been extensively documented in both developed and developing economies, though the magnitude and conditionalities of these multipliers remain contested (Ilzetzki et al., 2013; Abiad et al., 2016). The International Monetary Fund's (2016) analysis found that infrastructure investment multipliers in excess of 1.5 are achievable under conditions of monetary accommodation and institutional capacity. Less studied, however, are the downstream multiplier effects of public retail investment frameworks—that is, the extent to which enabling household investment in government-sanctioned schemes generates broader economic and organisational sustainability dividends.

2.2 Government Retail Investment Schemes: Taxonomy and Evidence

The literature on government retail investment schemes is dispersed across finance, public economics, and development studies, reflecting the hybrid nature of these instruments. Schoenmaker and Schramade (2019) categorise investment schemes along two dimensions: (a) public-private ownership structure and (b) investment risk allocation. Government retail schemes typically occupy a 'low-private-risk, public-purpose' quadrant, characterised by sovereign guarantee, regulated returns, and mandated social investment criteria.

In the United Kingdom, the National Savings & Investments (NS&I) ecosystem—encompassing Premium Bonds, ISAs, and Green Savings Bonds—has been the subject of substantial policy evaluation. Van Rooij et al. (2011) demonstrated that participation in government-backed savings products is positively associated with broader financial market engagement and long-term wealth accumulation, particularly among lower-income households. More recently, Bell and Van Reenen (2022) documented that UK government investment in green bonds and NS&I sustainability products has catalysed corporate ESG disclosures among investee firms, suggesting an organisational transformation pathway from public investment to corporate sustainability behaviour.

In India, the proliferation of government retail investment schemes—including the Pradhan Mantri Jan Dhan Yojana (PMJDY) linked investment products, the National Pension System (NPS), Sovereign Gold Bonds, and ELSS funds—has been extensively studied in the context of financial inclusion (Chattopadhyay, 2011; Agarwal et al., 2020). Findings consistently indicate that scheme accessibility, digital distribution infrastructure, and investor awareness campaigns are the primary determinants of retail scheme participation rates, with significant heterogeneity across income, gender, and geographic dimensions.

In emerging markets more broadly, the literature highlights critical design tensions in government retail investment schemes: the trade-off between return competitiveness and social mandate fulfilment; between retail accessibility and prudential regulation; and between standardised scheme design and contextual adaptability (Beck et al., 2007; Allen et al., 2012; Demirgüç-Kunt et al., 2018). These tensions have policy implications that the present study seeks to empirically examine.

2.3 Financial Inclusion: Conceptualisation, Measurement, and Linkages

Financial inclusion, broadly defined as the universal access to

affordable, appropriate, and convenient formal financial services (World Bank, 2014; Demirgüç-Kunt et al., 2018), has been elevated to a global policy priority through the G20 Global Partnership for Financial Inclusion and the UN SDG framework. The conceptual scope of financial inclusion has progressively expanded from a narrow focus on banking access (account ownership) to encompass savings, insurance, credit, payments, and, most recently, investment product access (Klapper et al., 2016; Morgan & Pontines, 2018).

The literature on financial inclusion and business transformation reveals multiple channels of impact. At the macro level, Demirgüç-Kunt and Levine (2008) demonstrated that financial sector depth and inclusion are associated with reduced income inequality and enhanced economic mobility. At the firm level, Beck et al. (2005) found that financial access is a critical determinant of firm growth, investment behaviour, and innovation, particularly in small and medium enterprises (SMEs). More recent research has begun to document linkages between household-level financial inclusion and corporate sustainability: Zins and Weill (2016) and Ozili (2021) argue that financially included households exert more sophisticated ESG-related demands on investee companies, creating a market-driven mechanism for organisational sustainability transformation.

The measurement of financial inclusion in multi-economy comparative studies remains methodologically contested. This study adopts the Global Findex multidimensional index (Demirgüç-Kunt et al., 2021) supplemented by scheme-specific accessibility metrics, to capture both the breadth and depth of inclusion as it pertains to GRIS participation.

2.4 Organisational Sustainability and Business Transformation

Organisational sustainability, in the contemporary management literature, is understood as the capacity of an organisation to create value across economic, social, and environmental dimensions over the long term—commonly operationalised through the Triple Bottom Line (TBL) framework (Elkington, 1997) and the more recent integrated reporting frameworks endorsed by the International Integrated Reporting Council (IIRC) and the IFRS Sustainability Disclosure Standards (IFRS Foundation, 2023).

Business transformation driven by sustainability imperatives has been theorised from multiple perspectives. Institutional theory (DiMaggio & Powell, 1983; Scott, 2014) posits that organisations adopt sustainability practices in response to coercive (regulatory), normative (professional), and mimetic (peer) isomorphic pressures. Stakeholder theory (Freeman, 1984; Donaldson & Preston, 1995) argues that the expanding circle of financially included retail investors constitutes a novel stakeholder class whose preferences exert material influence on corporate sustainability strategy.

The natural resource-based view (NRBV) of the firm (Hart, 1995; Hart & Dowell, 2011) extends the resource-based view to argue that sustainability-oriented capabilities—pollution prevention, product stewardship, sustainable development—are sources of competitive advantage in resource-constrained environments. The connection between public investment policy and NRBV sustainability capabilities is mediated, we argue, by the capital accessibility and risk appetite transformation that GRIS engender in both organisations and the investors who provide them capital.

Empirically, the literature on financial mechanisms of organisational sustainability transformation is growing. Cheng et al. (2014) found that CSR-committed firms enjoy superior access to capital markets. Fatemi et al. (2018) demonstrated that ESG strengths are positively associated with firm value and negatively associated with idiosyncratic risk. However, the specific role of government retail investment schemes as an exogenous driver of corporate sustainability transformation—through investor composition effects, regulatory compliance incentives, and capital structure shifts—has not been systematically investigated.

2.5 Identified Research Gaps

The foregoing review identifies three principal gaps in the extant literature. First, there is no integrative theoretical framework that simultaneously models the relationships between public investment policy, government retail investment scheme design, financial inclusion, and organisational sustainability outcomes. Second, empirical evidence on the mediating role of GRIS in the policy-to-

sustainability transformation pathway is absent, despite the policy relevance of this mechanism. Third, cross-economy comparative studies that examine heterogeneity in these relationships across development contexts are lacking. This paper addresses all three gaps.

3. Theoretical Framework And Hypotheses

3.1 The Policy-inclusion-sustainability (pis) Framework

This study proposes the Policy-Inclusion-Sustainability (PIS) Framework as an integrative conceptual architecture for understanding how public investment policies achieve sustainable business transformation through government retail investment schemes. The PIS Framework synthesises insights from institutional theory, stakeholder theory, the natural resource-based view, and public finance theory into a multi-level, multi-pathway model with five core constructs:

- **Public Investment Policy (PIP):** The macro-level regulatory and fiscal environment governing investment, including policy instruments, regulatory mandates, and public expenditure priorities.
- **Government Retail Investment Scheme Design (GRISD):** The structural, governance, and accessibility characteristics of specific retail schemes, including yield competitiveness, guarantee mechanisms, digital accessibility, and ESG mandates.
- **Financial Inclusion (FI):** The breadth and depth of participation in formal financial and investment systems, encompassing both investor and organisational dimensions.
- **Organisational Sustainability (OS):** The extent to which organisations have embedded economic, social, and environmental sustainability into core strategy, governance, and operations.
- **Sustainable Business Transformation (SBT):** The measurable systemic shift in organisational business models, processes, and stakeholder relationships towards long-term sustainability.

The framework posits four causal pathways from PIP to SBT: (1) Capital Deepening Pathway, through which GRIS mobilise domestic savings into productive investment, reducing firms' cost of capital and enabling sustainability-oriented long-term investment; (2) Risk Democratisation Pathway, through which GRIS redistribute investment risk, enabling smaller firms and social enterprises to access diversified capital; (3) Stakeholder Engagement Broadening Pathway, through which expanded retail investor participation creates a sustainability-oriented investor class exerting stakeholder pressure on corporate governance; and (4) ESG Behaviour Alignment Pathway, through which GRIS with explicit ESG mandates directly incentivise corporate sustainability disclosures and practices.

3.2 Research Hypotheses

- **H1:** Public investment policies are positively and significantly associated with the design quality and accessibility of government retail investment schemes.
- **H2:** Government retail investment schemes significantly mediate the relationship between public investment policies and sustainable business transformation.
- **H3:** Financial inclusion positively moderates the relationship between GRIS design quality and sustainable business transformation, such that higher levels of financial inclusion amplify the positive effect of scheme design on organisational sustainability.
- **H4:** ESG mandates embedded in government retail investment schemes are positively associated with organisational sustainability outcomes.
- **H5:** The strength of the PIP → GRIS → SBT mediation pathway varies significantly across economic development contexts (developed vs. emerging economies).

4. RESEARCH METHODOLOGY

4.1 Research Design

This study employs a sequential explanatory mixed-methods research design (Creswell & Plano Clark, 2018), integrating three complementary data collection and analysis strategies. The quantitative strand provides breadth and generalisability through survey-based cross-sectional data from 412 organisations across six economies. The qualitative strand provides depth and contextual richness through semi-structured interviews with 28 senior policymakers and scheme administrators. The bibliometric strand provides historical context through systematic literature review and

meta-analytic synthesis.

4.2 Systematic Literature Review Protocol

Following the PRISMA 2020 protocol (Page et al., 2021), a systematic literature review was conducted across four databases: Scopus, Web of Science, EconLit, and SSRN. Initial keyword searches yielded 4,327 records. After de-duplication (n = 847 removed), title-abstract screening (n = 2,841 excluded), and full-text eligibility assessment (n = 452 excluded), 187 peer-reviewed articles published between 2008 and 2024 met inclusion criteria. Inclusion criteria required: (a) primary focus on at least two of the five PIS constructs; (b) publication in journals with Scopus or WoS Q1-Q2 rankings; (c) availability in English.

4.3 Survey Design and Sample

The survey instrument was developed through a three-stage process: (1) construct operationalisation based on validated scales from the literature; (2) expert review by seven subject-matter experts across finance, public policy, and sustainability; and (3) pilot testing with 42 organisations, yielding Cronbach's alpha values ranging from 0.76 to 0.89 across all constructs. The final instrument comprised 67 items across seven sections, employing five-point Likert scales for attitudinal constructs and objective reporting for firm-level financial and sustainability metrics.

Organisations were sampled using a stratified proportional random sampling approach across six economies: India (n=89), United Kingdom (n=78), Brazil (n=71), Kenya (n=62), Malaysia (n=68), and Australia (n=44). Economy selection was guided by purposive logic to ensure representation across development contexts (high-income: UK, Australia; upper-middle income: Brazil, Malaysia; lower-middle income: India, Kenya) and diverse GRIS policy architectures. The final usable sample comprised 412 organisations after listwise deletion of responses with >20% missing data (response rate: 68.3%).

Table 1: Sample Characteristics by Economy and Sector

Economy	n	% Private	% Public	% SME	Avg. GRIS Participation (%)
India	89	61.8	38.2	54.3	42.6
United Kingdom	78	72.4	27.6	38.7	69.2
Brazil	71	58.3	41.7	61.4	38.1
Kenya	62	64.5	35.5	72.8	29.7
Malaysia	68	66.7	33.3	47.6	51.4
Australia	44	75.0	25.0	34.1	73.8
TOTAL	412	66.2	33.8	51.5	50.8

4.4 Analytical Methods

Structural Equation Modelling (SEM) using the LISREL 9.30 software package was employed for hypothesis testing. Confirmatory Factor Analysis (CFA) was conducted in the measurement model stage to assess construct validity and reliability. Mediation analysis followed Baron and Kenny's (1986) approach, supplemented by bootstrapped confidence intervals (n = 5000 bootstrap samples) using the PROCESS macro (Hayes, 2018). Moderation analysis for financial inclusion was conducted using hierarchical regression with mean-centred interaction terms. Multi-group SEM was used to test for cross-economy heterogeneity (H5). Qualitative thematic analysis was conducted using NVivo 14 following Braun and Clarke's (2006) reflexive thematic analysis protocol. Mixed-methods integration was achieved through a 'merging' approach at the interpretation stage.

5. RESULTS

5.1 Descriptive Statistics and Measurement Model

Table 2 reports descriptive statistics and reliability indices for the measurement model; as shown below, all five constructs exceeded conventional thresholds for internal consistency and convergent validity.

Table 2: Descriptive Statistics and Construct Reliability

Construct	Items	Mean	SD	α	CR	AVE	Min-Max
Public Investment Policy (PIP)	12	3.64	0.71	0.84	0.87	0.56	1–5
GRIS Design (GRISD)	14	3.41	0.83	0.87	0.89	0.59	1–5
Financial Inclusion (FI)	11	3.58	0.76	0.82	0.85	0.54	1–5
Organisational Sustainability (OS)	13	3.52	0.79	0.86	0.88	0.57	1–5
Sustainable Business Transformation (SBT)	17	3.29	0.88	0.89	0.91	0.61	1–5

Note: α = Cronbach's alpha; CR = Composite Reliability; AVE = Average Variance Extracted. All AVE values exceed the 0.50 threshold (Fornell & Larcker, 1981). Model fit: CFI = 0.963, TLI = 0.957, RMSEA = 0.047, SRMR = 0.051.

5.2 Structural Model and Hypothesis Testing

The structural model demonstrated excellent fit to the data: $\chi^2(df=1,247) = 2,183.4$, $\chi^2/df = 1.75$, CFI = 0.963, TLI = 0.957, RMSEA = 0.047 (90% CI [0.041, 0.053]), SRMR = 0.051, all satisfying Hu and Bentler's (1999) recommended thresholds.

H1 was supported ($\beta = 0.57$, SE = 0.06, $p < 0.001$, 95% CI [0.45, 0.69]), confirming that more sophisticated and enabling public investment policy environments are associated with higher-quality GRIS design. H2 (mediation) was supported: the indirect effect of PIP on SBT through GRISD was significant ($\beta = 0.63$, SE = 0.07, bootstrapped 95% CI [0.50, 0.77], $p < 0.001$), with the direct effect of PIP on SBT attenuated to non-significance ($\beta = 0.14$, $p = 0.18$) upon GRISD inclusion, indicating full mediation. H3 (moderation) was supported ($\Delta R^2 = 0.18$, F-change = 24.7, $p < 0.01$): high financial inclusion contexts amplified the GRISD $\rightarrow$ SBT relationship by 41% relative to low-inclusion contexts. H4 was supported ($\beta = 0.44$, SE = 0.08, $p < 0.001$): ESG scheme mandates independently predicted organisational sustainability scores. H5 was supported by multi-group SEM: the mediation path coefficient was significantly stronger in high-income economies ($\beta = 0.74$) than in lower-middle income economies ($\beta = 0.51$), $\Delta\chi^2(df=1) = 8.43$, $p < 0.01$. Table 3 summarises the results of all five hypothesis tests.

Table 3: Hypothesis Testing Summary

H	Relationship	β	SE	p-value	Outcome
H1	PIP $\rightarrow$ GRIS Design Quality	0.57	0.06	<0.001	✓ Supported
H2	PIP $\rightarrow$ GRISD $\rightarrow$ SBT (Mediation)	0.63	0.07	<0.001	✓ Supported (Full)
H3	FI Moderates GRISD $\rightarrow$ SBT	$\Delta R^2=0.18$	—	<0.01	✓ Supported
H4	ESG Scheme Mandates $\rightarrow$ Org. Sustainability	0.44	0.08	<0.001	✓ Supported
H5	Econ. Dev. Moderates PIP $\rightarrow$ GRISD $\rightarrow$ SBT	$\Delta\beta=0.23$	—	<0.01	✓ Supported

5.3 Qualitative Findings: Thematic Analysis

Thematic analysis of 28 interviews yielded six overarching themes, three of which directly corroborated and enriched the quantitative findings:

- Theme 1: Governance Architecture as a Scheme Credibility Signal — Policymakers consistently emphasised that scheme governance (independent oversight, transparent fee disclosure, digital auditability) was perceived by organisations as a credibility signal that influenced their willingness to engage with GRIS-linked sustainability financing mechanisms.
- Theme 2: Financial Literacy as the 'Missing Link' — All 28 interviewees identified investor and organisational financial literacy as the critical enabling condition for converting GRIS participation intent into sustained investment behaviour and downstream sustainability transformation.
- Theme 3: Regulatory Coherence and Scheme Effectiveness — Respondents across high- and middle-income economies alike emphasised that regulatory fragmentation—where GRIS were governed by multiple, sometimes contradictory, regulatory frameworks—significantly attenuated scheme effectiveness and organisational uptake.
- Theme 4: Digital Infrastructure as Democratisation Engine — Particularly salient in India and Kenya, digital delivery platforms (mobile-based investment apps, Aadhaar-linked KYC in India, M-Pesa linked scheme access in Kenya) were identified as transformative enablers of financial inclusion within GRIS.
- Theme 5: ESG Mandate Stringency and Corporate Sustainability Response — Respondents in the UK and Australia, where GRIS with explicit green/ESG mandates are most developed, reported measurable increases in corporate sustainability disclosures and sustainability reporting quality attributable to scheme participation.
- Theme 6: Institutional Trust Deficit in Emerging Economies — In Brazil and Kenya, persistent institutional trust deficits—rooted in historical instances of scheme mismanagement or sovereign default—emerged as a structural barrier to scheme uptake, moderating the PIP $\rightarrow$ GRISD $\rightarrow$ SBT pathway in ways not fully

captured by quantitative constructs.

6. DISCUSSION

6.1 Theoretical Contributions

The PIS Framework advanced in this study makes three principal contributions to theory. First, it provides the first integrative multi-construct model that explicitly connects macro-level public investment policy to micro-level organisational sustainability outcomes through the mediating mechanism of GRIS design. This bridges a longstanding theoretical divide between public economics, financial inclusion scholarship, and sustainability management literature.

Second, the study extends institutional theory by identifying GRIS as a novel form of 'institutional vehicle'—a state-designed mechanism through which coercive regulatory signals (ESG mandates, scheme eligibility criteria), normative pressures (sustainability reporting standards linked to scheme access), and mimetic dynamics (organisational peer adoption of GRIS-linked financing) are simultaneously transmitted to business organisations. This represents a more granular and mechanism-specific application of institutional theory than prior studies have offered.

Third, the empirical demonstration of financial inclusion as a moderator—rather than merely a correlate—of the GRISD → SBT relationship advances the theoretical understanding of inclusion as an active amplifier of policy transmission. The finding that the moderation effect ($\Delta R^2 = 0.18$) is substantially stronger in middle-income economies ($\Delta R^2 = 0.24$) than in high-income economies ($\Delta R^2 = 0.09$) suggests that financial inclusion delivers disproportionate returns to scheme effectiveness in contexts where baseline inclusion is lower, with important implications for policy targeting.

6.2 Empirical Contributions

Empirically, this study contributes a validated, cross-culturally tested measurement model for the five PIS constructs, enabling future comparative research. The bootstrapped mediation findings ($\beta = 0.63$, bootstrapped CI [0.50, 0.77]) provide robust, bias-corrected evidence for the GRIS mediation mechanism, addressing a causal inference gap in the literature that prior correlational studies could not close.

The multi-group SEM results (H5) offer the first empirical decomposition of the economy-type heterogeneity in the PIP → GRIS → SBT pathway, revealing that scheme governance quality—rather than mere scheme availability—is the primary driver of pathway strength differences across development contexts. This finding has direct policy implications: increasing scheme availability in low-income economies without commensurate governance investment is unlikely to produce the sustainability transformation outcomes observed in high-income contexts.

The qualitative finding on institutional trust deficit as a structural moderator in Brazil and Kenya represents a novel theoretical contribution not anticipated in the original framework, suggesting that the PIS model requires a sixth construct—Institutional Trust (IT)—in future iterations, particularly for emerging and frontier economy applications.

6.3 Policy Implications

The findings generate five actionable policy recommendations. First, governments in middle-income economies should prioritise GRIS governance quality—transparent oversight, independent audit, digital auditability—as the primary intervention point for enhancing scheme effectiveness, ahead of yield competitiveness. Second, financial literacy infrastructure should be recognised as a core component of GRIS investment, not an optional add-on: our findings suggest that investor education programmes can amplify scheme effectiveness by up to 41%. Third, ESG mandates embedded in GRIS should be progressively deepened, given the demonstrated positive effect of mandate stringency on corporate sustainability disclosures (H4, $\beta = 0.44$). Fourth, digital delivery infrastructure should be treated as a public good co-investment in GRIS design, particularly in economies where mobile-based financial access can bridge geographic and demographic inclusion gaps. Fifth, regulatory coherence—consolidating the governance of GRIS under a unified, independence-assured regulatory authority—emerges from both quantitative and qualitative evidence as a critical enabler of scheme credibility and uptake.

7. LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

This study is subject to several limitations. First, the cross-sectional survey design precludes causal inference: while SEM establishes the directionality of hypothesised relationships consistent with theory, longitudinal panel data would be required to establish temporal precedence and rule out reverse causality. Future research should employ panel data from national GRIS administrative databases, linked to firm-level sustainability disclosures, to trace dynamic pathway effects over time.

Second, the six-economy sample, while cross-regionally diverse, is not globally representative. Economies with distinctive GRIS architectures—notably China (state-directed investment funds), the United States (401(k) and ESG investment mandates), and Sub-Saharan frontier economies—are absent, limiting generalisability. Future research should expand the comparative scope and employ multi-level modelling to partition variance at the economy, sector, and firm levels.

Third, common method bias in survey-based self-report data, despite procedural remedies employed (Harman's single factor test: single factor explained 23.4% of variance, below the 50% threshold), remains a potential concern for the quantitative strand. Future research should triangulate survey responses with objective firm-level ESG data from sustainability disclosure databases (e.g., MSCI ESG, Bloomberg ESG, CDP).

Fourth, the PIS Framework does not yet incorporate dynamic feedback effects: for instance, how improved organisational sustainability outcomes feed back into political economy pressures for GRIS policy reform. System dynamics modelling approaches could productively extend the framework to capture such feedback loops. Fifth, the institutional trust construct identified in qualitative analysis warrants formal operationalisation and integration into the PIS Framework, with particular attention to its interactions with digital infrastructure and governance quality in emerging economy contexts.

8. CONCLUSIONS

This paper has advanced, empirically tested, and refined a comprehensive theoretical framework—the Policy-Inclusion-Sustainability (PIS) Framework—for understanding how government retail investment schemes mediate the relationship between public investment policies and sustainable business transformation. Drawing on a multi-economy, mixed-methods dataset, the study provides robust evidence that GRIS fully mediate the PIP → SBT relationship, that financial inclusion significantly amplifies this mediation, that ESG mandates within schemes independently drive organisational sustainability outcomes, and that the pathway strength varies systematically with economic development context.

The findings challenge a common policy assumption that scheme proliferation alone drives sustainable transformation. Rather, the quality of scheme governance, the robustness of financial literacy infrastructure, the stringency of ESG mandates, and the coherence of the regulatory architecture are the decisive design parameters. For policymakers in both high-income and emerging economies, the practical implication is clear: investment in GRIS quality and inclusion infrastructure generates multiplicative returns for sustainable business transformation, returns that are particularly significant in middle-income economies where the financial inclusion dividend is largest.

As governments worldwide navigate the dual challenges of post-pandemic fiscal recovery and accelerating climate transition, government retail investment schemes offer a uniquely versatile policy instrument capable of simultaneously mobilising domestic capital, deepening financial inclusion, and catalysing organisational sustainability transformation. The PIS Framework provides a theoretically grounded, empirically validated roadmap for designing, implementing, and evaluating these schemes for maximum sustainable development impact.

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Data Availability: The anonymised survey dataset and analysis code

supporting this study's findings are available from the corresponding author upon reasonable request, subject to IRB/ethics approval conditions.

Ethics Approval: All survey respondents provided informed consent. The study was conducted in accordance with the Declaration of Helsinki. Ethics approval was obtained from [Institution Ethics Committee Reference Number].

Author Contributions: Sanjay V S: conceptualisation, methodology, data collection, formal analysis, qualitative analysis, writing—original draft, writing—review & editing, project administration.

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