

SOCIAL SUSTAINABILITY PRACTICES AND FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

BY

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Abstract

This paper examined the effect of social sustainability practices on the financial performance of commercial banks in Kenya. Inclusive lending to women, youth and small and medium enterprises occupies an ambivalent position in banking: it advances a developmental mandate that Kenyan policy has actively promoted, yet it concentrates credit in borrower segments characterized by limited collateral, informal income streams and shorter credit histories, and a substantial share of it is originated under concessional or directed schemes. Whether it contributes to or detracts from profitability is therefore an empirical rather than a normative question. The study adopted a positivist philosophy and an explanatory longitudinal panel design. The target population comprised all 38 commercial banks licensed by the Central Bank of Kenya, a census was adopted, and secondary data were extracted from audited annual reports, sustainability disclosures and regulatory publications for 2015 to 2024, yielding a balanced panel of 380 bank-year observations with complete coverage. Social sustainability practices were measured by the inclusive lending ratio and financial performance by return on assets. Estimation used hierarchical panel fixed effects regression with HC1 robust standard errors, following a full diagnostic battery and a Hausman specification test. The social coefficient was negative and statistically insignificant in every specification: in the direct-effects model ($\beta = -0.018$, $SE = 0.013$, $p = 0.159$), with firm size controlled ($\beta = -0.011$, $SE = 0.014$, $p = 0.419$), and with the interaction terms present ($\beta = -0.010$, $SE = 0.014$, $p = 0.445$). The null hypothesis was not rejected. The result held under pooled ordinary least squares ($\beta = -0.014$, $p = 0.352$), under two-way fixed effects with year dummies ($\beta = -0.017$, $p = 0.290$) and in the post-2021 sub-period ($\beta = 0.031$, $p = 0.111$). The interaction between social practices and firm size was insignificant ($\beta = 0.104$, $p = 0.293$), so the null result is not an artefact of averaging across institutions of different scale. The evidence is consistent with a credit-risk and concessional-pricing cost that offsets the relationship and reputational benefits of inclusive lending within an annual accounting horizon, and with the limitation of a volume-based proxy that captures the quantity of directed credit but not the quality or depth of social engagement.

Keywords: Social Sustainability Practices, Inclusive Lending Ratio, Financial Inclusion, Return on Assets, Commercial Banks, Panel Fixed Effects, Kenya.

Introduction

Financial inclusion has been among the most consistently pursued objectives of Kenyan financial-sector policy for two decades, and commercial banks have been its principal instrument. Lending to women, youth and small and medium enterprises is the operational expression of that objective within the banking system, and it is the dimension of social sustainability practice that is both measurable from published disclosures and directly connected to the core intermediation function of a bank rather than peripheral to it. Where a bank's environmental exposure arises through the carbon profile of what it

finances, its social exposure arises through who it finances, and the two are analytically distinct.

The proposition that such lending is financially rewarding has a well-developed theoretical basis. Stakeholder Theory holds that responsiveness to the expectations of employees, customers, communities and regulators secures the legitimacy, cooperation and resources on which continued operation depends, and that the resulting reputational capital translates into commercial advantage (Freeman, 1984; Awa et al., 2024). Applied to inclusive credit, the account predicts that a bank serving underserved segments builds customer loyalty and relationship depth, differentiates

itself in a competitive retail market, secures regulatory goodwill, and acquires borrowers who may in time graduate into higher-value commercial relationships. Legitimacy Theory adds that such activity preserves the social license to operate in a market where public and political scrutiny of bank profitability is intense (Dowling & Pfeffer, 1975; Suchman, 1995; Deegan, 2002). Meta-analytic evidence across sectors reports a predominantly positive or neutral association between social performance and financial performance (Friede et al., 2015; Waddock & Graves, 1997).

Against this stands an equally coherent commercial account. The borrower segments that constitute inclusive lending are, by the criteria conventional credit assessment applies, higher risk. They frequently lack registered collateral, generate irregular or informally documented income, and have shorter or absent credit histories, so they attract higher expected default rates and heavier loan-loss provisioning than corporate or prime retail exposures. A material share of Kenyan inclusive credit has moreover been originated under government-backed guarantee schemes and directed programmes that prescribe concessional pricing, which compresses the net interest income the exposure generates without proportionately compressing its cost. Where these effects are large enough, the reputational and relationship benefits that the stakeholder account identifies are offset within the horizon over which annual profitability is measured, and the observed coefficient approaches zero even though both channels are real.

The empirical record is correspondingly divided, and the division is not confined to emerging markets. Margolis and Walsh (2003) documented the heterogeneity of findings across the corporate social performance literature long before the banking-specific evidence accumulated. Within banking, Gutiérrez-Ponce and Wibowo (2023) found the social pillar significantly and positively associated with return on assets in Indonesia, Moufity et al. (2021) found a positive social effect in the European Union and the United States, and Jan et al. (2019), Zyadat (2017) and Al-Dhaimesh and Al Zobi (2019) found social dimensions positive where environmental dimensions were not. Tandelilin and Usman (2023) found social impact and corporate social responsibility reporting negatively associated with bank performance across five ASEAN economies, Matuszak and Róžańska

(2017) reported comparable results for Polish institutions, and Nobanee and Ellili (2017) found no dimension significant in the United Arab Emirates.

What is largely absent is African banking evidence in which the social dimension is measured through the composition of the loan book rather than through a disclosure index or a composite score, estimated within institutions over time, on a population rather than a sample. This study supplies it. It examined the effect of social sustainability practices, measured by the inclusive lending ratio, on the financial performance of commercial banks in Kenya, measured by return on assets, over 2015 to 2024, using the full population of 38 licensed institutions.

Statement of the Problem

The profitability of the Kenyan banking sector has weakened materially over the past decade. Sector-wide return on assets contracted from 3.24 per cent in 2015 to 1.90 per cent in 2024, and the number of loss-making institutions rose from two to nine across the same interval, with several banks reporting recurrent annual losses (Central Bank of Kenya, 2024). Because the capacity of the banking system to extend credit depends on its profitability, and because credit constraint suppresses enterprise formation and employment, establishing which of a bank's activities support and which erode profitability is a matter of financial-sector policy (Abdi et al., 2022; Chima et al., 2021).

Inclusive lending sits at the centre of this question, and it does so in an unusually consequential way. Banks are simultaneously required by policy to expand credit to women, youth and small and medium enterprises and required by prudential supervision to maintain profitability and asset quality. If inclusive lending is profitable, the two mandates are complementary and expansion requires no subsidy. If it is unprofitable, the mandates conflict and the policy design must address the cost rather than assume it away. The empirical basis for deciding between these possibilities does not currently exist for Kenya.

The available evidence does not settle it, and the sources of divergence are identifiable. Studies differ in how the social construct is measured. Composite environmental, social and governance scores aggregate dimensions whose effects may run in opposite directions, so an insignificant aggregate may conceal

offsetting components; Tandelilin and Usman (2023) separated the dimensions for precisely this reason, and Giannopoulos et al. (2024), AlAjmi et al. (2023) and Halim et al. (2024) illustrate the interpretive difficulty that composite measurement creates. Studies relying on disclosure indices measure reporting behaviour rather than lending behaviour, and a bank may report extensively on social engagement while directing little credit to underserved segments. Studies differ in estimator, with cross-sectional and pooled designs identifying the relationship from differences between banks in sectors whose structural heterogeneity makes such comparisons unreliable. And studies differ in horizon: where the benefits of social engagement accrue through relationship depth and borrower graduation over long periods, an annual accounting measure may be poorly matched to the mechanism.

Two further weaknesses limit the record specifically for Kenya. The geographical distribution of the evidence is heavily skewed toward Europe, North America and Asia, and African banking evidence remains sparse, notwithstanding that banks in these markets operate under an explicit developmental credit mandate that has no close counterpart in the markets where most of the evidence was generated. And bank size, which governs the capacity to absorb the credit risk that inclusive lending carries and to diversify it across a larger portfolio, has commonly been entered as a control or omitted rather than examined as a condition that might change the relationship, notwithstanding evidence that its role is neither uniform nor consistently positive (Abadi & Lutfi, 2025; Nhu, 2025; Rahma & Wedari, 2024).

Without evidence resolving these issues, Kenyan bank management cannot establish whether inclusive lending is a commercial activity or a subsidised one, boards cannot hold it to an appropriate standard, and the Central Bank of Kenya, the National Treasury and the guarantee institutions cannot calibrate the support required to make expansion sustainable. This study therefore examined the effect of social sustainability practices on the financial performance of commercial banks in Kenya using a census of all 38 licensed institutions over 2015 to 2024, measuring social practice through the composition of the loan book and testing whether the relationship depends on institutional scale.

General Objective

The general objective of the study was to examine the effect of social sustainability practices on the financial performance of commercial banks in Kenya.

Specific Objective

To examine the effect of social sustainability practices, measured by the inclusive lending ratio, on the financial performance of commercial banks in Kenya, measured by return on assets.

Research Hypothesis

H₀₂: Social sustainability practices have no significant effect on the financial performance of commercial banks in Kenya.

Theoretical Review

The study was anchored primarily on Stakeholder Theory and Legitimacy Theory, with Economies of Scale Theory supplying the account of why institutional size might condition the relationship.

Stakeholder Theory, formulated by Freeman (1984), holds that an organisation is accountable to every group that affects or is affected by its operations, and that responsiveness to those groups is instrumentally as well as ethically justified because it secures the legitimacy, cooperation and resources on which continued operation depends (Awa et al., 2024). Its application to inclusive lending is direct. A bank extending credit to women, youth and small and medium enterprises responds to the expectations of the communities in which it operates, of the regulator that has made financial inclusion an explicit policy objective, and of the employees and customers for whom the institution's social standing matters. The theory predicts that the resulting relationship capital yields commercial returns through customer loyalty, deposit stability, reduced marketing cost per acquired customer, and the eventual migration of successful borrowers into higher-value products.

The theory does not, however, predict the timing of those returns, and this is the point at which its application to an annual accounting measure becomes uncertain. The mechanisms it identifies operate through the accumulation of relationships and reputation, which is a stock rather than a flow. The costs of inclusive lending, by contrast, are recognised immediately, through provisioning against elevated

expected losses and through the compression of net interest margin where pricing is concessional. Stakeholder Theory therefore generates a positive expectation over a long horizon and an ambiguous expectation over the horizon on which return on assets is measured, which is a distinction the empirical literature has generally left implicit.

Legitimacy Theory, developed from Dowling and Pfeffer (1975) and elaborated by Suchman (1995) and Deegan (2002), holds that organisations must demonstrate congruence between their activities and prevailing social values in order to preserve the implicit social contract under which they operate. Its bearing here differs from its bearing on the environmental dimension in one important respect. The financial value of legitimacy-seeking activity depends on the activity being observed by the parties whose behaviour it is intended to influence, and inclusive lending in Kenya is not disclosed under a standardised regulatory framework in the way that climate-related lending became after 2021. Where the practice is reported inconsistently and cannot be compared across institutions, the reputational channel through which the theory predicts a financial benefit operates weakly. The theory thus supplies a reason to expect the social relationship to be weaker than the environmental one even if the underlying social engagement is genuine.

Economies of Scale Theory, tracing to Marshall (1920) and formalised by Baumol (1959), holds that average cost declines with output where fixed costs are spread across a larger volume of activity. Its relevance here concerns risk absorption rather than origination capacity. A larger bank can diversify inclusive exposures across a wider portfolio, can absorb the volatility of default in a segment with limited credit history without material effect on aggregate profitability, and can fund the credit scoring and alternative data infrastructure that reduces adverse selection among thin-file borrowers. If these advantages are material, the return to inclusive lending should be higher in larger institutions, which is a proposition about an interaction between social practice and size. The study tested it directly.

Taken together, the three theories generate an expectation that is deliberately not one-directional: a positive long-horizon channel operating through relationships and legitimacy, a negative short-horizon

channel operating through credit risk and concessional pricing, a weakened reputational channel owing to the absence of standardised disclosure, and a possible conditioning role for scale. The empirical task is to establish which of these dominates within the horizon observed.

Empirical Review

The empirical literature connecting social practice to bank performance is best read according to two distinctions: how the social construct is measured, and over what horizon the outcome is observed.

Studies finding a positive social effect are numerous and geographically dispersed. Gutiérrez-Ponce and Wibowo (2023), using fixed effects on Indonesian banks, found the social pillar significantly and positively associated with both return on assets and return on equity while governance carried a significant negative effect on Tobin's Q, which is itself evidence that dimensional effects diverge and that composite treatment obscures them. Moufity et al. (2021), applying structural equation modelling to European Union and United States banks, found a positive social effect and no environmental effect, the mirror image of the Kenyan pattern. Jan et al. (2019) reported positive economic and social effects and a negative environmental effect among Malaysian Islamic banks. Zyadat (2017) and Al-Dhaimesh and Al Zobi (2019) found social and economic dimensions positive and the environmental dimension insignificant in Jordanian banking. Zafar et al. (2022), applying content analysis and partial least squares regression to Pakistani Islamic banks over 2003 to 2017, found a positive relationship between corporate social responsibility and financial performance. Esteban-Sanchez et al. (2017) reported international evidence linking corporate social performance to financial performance in banking, and Shakil et al. (2019) found environmental and social performance associated with financial performance across emerging-market banks while governance was not.

Studies finding a null or negative social effect are equally substantial. Tandililin and Usman (2023), examining 27 listed banks across Indonesia, Malaysia, Singapore, the Philippines and Thailand over 2011 to 2019 using the generalised method of moments, found social impact and corporate social responsibility reporting negatively associated with bank performance

measured on both accounting and market bases. Matuszak and Róžańska (2017) reported comparable evidence for Polish listed institutions. Nobanee and Ellili (2017) found economic, environmental and social disclosure all insignificant for return on assets in the United Arab Emirates. AlAjmi et al. (2023), on 245 emerging-market banks over thirteen years, found composite disclosure scores negatively associated with performance. Giannopoulos et al. (2024) found a negative correlation between composite scores and both return on assets and return on equity across banks listed on the London Stock Exchange, and Halim et al. (2024) found negative effects in Bangladesh. Saadaoui and Ben Salah (2023) found the social dimension specifically insignificant, with only the environmental dimension carrying a significant coefficient. Islam et al. (2025) found that neither environmental, social and governance performance nor regulatory environment improved performance in banks across the Organization of Islamic Cooperation, while competition did, and Shabir et al. (2024) and Bouattour et al. (2024) established that the association is context-dependent and, in the latter case, non-linear. Three observations follow from this record. First, the divergence is systematic rather than random and it correlates with measurement. Studies employing composite scores report the widest dispersion of findings, which is what aggregation of dimensions with opposing signs would produce, and studies isolating dimensions more frequently find that the social and environmental dimensions behave differently within the same sample. Second, almost none of the evidence measures social practice through the composition of the loan book. Disclosure indices, survey-based ratings and reporting scores dominate, and each measures the communication of social engagement rather than its conduct. Third, the horizon problem is acknowledged but rarely addressed: where the theorised mechanism operates through relationship accumulation over long periods, an annual accounting measure will understate it, and few designs are constructed to detect a lagged effect.

Evidence from Africa is thin, and what exists concerns reporting rather than lending. Matemane and Wentzel (2019) examined integrated reporting and the financial performance of South African listed banks, and Ahmad et al. (2021) revisited the relationship in developing economies generally. Cek and Eyupoglu

(2020) provide an emerging-market baseline, Velte (2017) a German one, and Weber (2017) established bi-directional causality between sustainability and financial performance among Chinese banks. What the literature does not contain is a census-based panel estimate, for an African banking system operating under an explicit financial-inclusion mandate, of the effect of a lending-based social measure on accounting profitability, estimated within institutions over time and tested against alternative estimators, sub-periods and a conditioning role for scale. That is the gap this study addresses.

Methodology

Research design

The study adopted a positivist research philosophy and an explanatory longitudinal panel research design. The explanatory component was appropriate because the study sought the direction, magnitude and statistical significance of a theoretically derived relationship rather than a description of it. The longitudinal panel component followed from observing every licensed commercial bank annually across 2015 to 2024, with individual banks as the cross-sectional units (Baltagi, 2021; Saunders et al., 2019; Wooldridge, 2020). The panel structure permits change within institutions over time to be identified separately from differences between institutions, which is essential in a sector whose structural heterogeneity makes cross-sectional comparison unreliable, and it allows the interaction between social practice and scale to be estimated meaningfully because bank size varies over time.

Population and Sampling

The target population comprised all commercial banks licensed by the Central Bank of Kenya during the study period, of which there were 38 (Central Bank of Kenya, 2024). Because the population was small, clearly bounded and fully documented, a census was adopted rather than a sample. The census eliminated sampling error entirely, ensured that the findings reflect the whole structural spectrum of the sector rather than a subset of it, and strengthened external validity within the Kenyan context (Kothari, 2014; Saunders et al., 2019). The unit of analysis was the individual commercial bank and the unit of observation was the bank-year. Thirty-eight banks observed over ten financial years generated a balanced

panel of 380 bank-year observations with a data coverage rate of 100 per cent.

Data Collection Instruments

The study relied exclusively on secondary data, and a structured data extraction template served as the principal instrument. The template specified each variable, its measurement criteria, its source document and the coding procedure to be applied, and recorded the underlying raw values before any ratio was computed, creating an auditable link between the published figure and the analysed variable (Cooper & Schindler, 2014; Creswell & Creswell, 2018). Audited annual reports and financial statements supplied profit before tax and total assets for every bank in every year. Sustainability, integrated and corporate governance reports supplied the inclusive lending data. Regulatory publications issued by the Central Bank of Kenya supplied tier classifications and the sector-level benchmarks against which bank-level figures were verified (Central Bank of Kenya, 2024). Content analysis was applied to the sustainability disclosures in order to compile the required indicators, and consistent measurement criteria were applied across institutions where reporting detail varied.

Operationalization of Variables

Social sustainability practices were measured by the inclusive lending ratio, calculated as loans advanced to women, youth and small and medium enterprises divided by total loans advanced. The measure was chosen because the social exposure of a bank arises principally through the composition of its credit portfolio rather than through peripheral corporate activity, because inclusive lending is the operational expression of the financial-inclusion mandate under which Kenyan banks operate, and because a ratio rather than an absolute value permits institutions of very different scale to be compared directly. Financial performance was measured by return on assets, calculated as profit before tax divided by total assets. Firm size was measured as the natural logarithm of total assets. Because the underlying research model also contained environmental sustainability practices, measured by the green loan ratio, and governance sustainability practices, measured by the board independence ratio, these were retained in the estimated equation so that the social coefficient would not be contaminated by omitted-variable bias; they are

not the subject of this paper and receive no separate interpretation here.

Validity and Reliability of the Data

Because the study used secondary data, instrument piloting and internal-consistency reliability testing were not applicable. Validity was secured through construct alignment, each variable being measured by a ratio matched to its operational definition and to the economics of banking; through source authority, audited financial statements being independently verified records; and through an auditable link from the published figure to every computed ratio. Reliability was secured through a uniform extraction template applied identically across all institutions and reporting years, through recomputation and verification of every calculated variable, and through cross-validation of sustainability disclosures against regulatory publications where more than one source was available (Cooper & Schindler, 2014; Hair et al., 2019; Kothari, 2014).

Model Specification and Estimation

Three hierarchical models were specified. The baseline model regressed return on assets on the three sustainability dimensions; the second added firm size; the third added the interaction between firm size and each sustainability dimension. The hierarchical ordering follows the procedure for testing moderation set out by Baron and Kenny (1986), under which direct effects must be established before an interaction can meaningfully be interpreted. The models were specified as $ROA_{it} = \beta_0 + \beta_1 ENV_{it} + \beta_2 SOC_{it} + \beta_3 GOV_{it} + \alpha_i + \varepsilon_{it}$; $ROA_{it} = \beta_0 + \beta_1 ENV_{it} + \beta_2 SOC_{it} + \beta_3 GOV_{it} + \beta_4 FSIZE_{it} + \alpha_i + \varepsilon_{it}$; and $ROA_{it} = \beta_0 + \beta_1 ENV_{it} + \beta_2 SOC_{it} + \beta_3 GOV_{it} + \beta_4 FSIZE_{it} + \beta_5 (ENV_{it} \times FSIZE_{it}) + \beta_6 (SOC_{it} \times FSIZE_{it}) + \beta_7 (GOV_{it} \times FSIZE_{it}) + \alpha_i + \varepsilon_{it}$, where α_i is the unobserved time-invariant bank-specific effect and the coefficient of interest is β_2 . Variables entering the interaction terms were mean-centred before multiplication in order to reduce the non-essential collinearity that interaction terms introduce by construction (Aiken & West, 1991; Dawson, 2014). Estimation used panel fixed effects with HC1 robust standard errors, the estimator selected by a Hausman specification test and the standard errors adopted in response to the diagnostic evidence reported below (Hausman, 1978; White, 1980). Significance was evaluated at the five per cent level.

Study Findings

Descriptive Statistics

Table 1 reports the pooled descriptive statistics for the variables central to this paper, computed across the full panel of 380 bank-year observations.

Table 1: Descriptive Statistics (N = 380)

Variable	Label	Mean	Std. Dev.	Minimum	Median	Maximum	Skewness	Kurtosis
ROA	Return on Assets	0.0250	0.0215	-0.0345	0.0275	0.0847	-0.290	-0.443
SOC	Inclusive Lending Ratio	0.2748	0.1071	0.0500	0.2601	0.5414	0.329	-0.535
FSIZE	Log (Total Assets)	7.7020	0.6683	6.7393	7.3849	9.2931	0.679	-0.910

Note. Researcher (2026). N = 380 bank-year observations from 38 banks over ten years.

The distribution of the explanatory variable is the descriptive fact that matters most for what follows. The inclusive lending ratio averaged 27.48 per cent of the loan book with a standard deviation of 10.71 percentage points and a range from 5.00 to 54.14 per cent, so more than a quarter of aggregate bank lending was directed to women, youth and small and medium enterprises, and the practice varied across a band nearly fifty percentage points wide. Its skewness of 0.329 and kurtosis of -0.535 describe a broadly symmetric distribution without a heavy tail. This is a materially different pattern from that of a niche or emergent practice: inclusive lending in Kenyan banking is widespread, substantial in volume and variable across institutions, which means that the null

result reported below cannot be attributed to insufficient variation in the regressor or to the practice being too small to register.

Return on assets averaged 2.50 per cent with a standard deviation of 2.15 percentage points and a range from a loss of 3.45 per cent to a profit of 8.47 per cent, so the dependent variable varies across nearly twelve percentage points and the sector contains genuinely loss-making institutions. Firm size averaged 7.7020 in logarithms with a range from 6.7393 to 9.2931, confirming the dispersion of scale that the sector's tier structure implies and that is necessary if a conditioning role for size is to be identified.

Table 2 reports the pairwise correlations.

Table 2: Pearson Pairwise Correlation Matrix (N = 380)

Variable	ROA	SOC	FSIZE
ROA	1.000	0.298***	0.408***
SOC	0.298***	1.000	0.799***
FSIZE	0.408***	0.799***	1.000

*Note. Researcher (2026). *** $p < .01$. Correlations for the environmental and governance dimensions are omitted because they are not the subject of this paper.*

The correlation between inclusive lending and return on assets is positive and significant at 0.298, which at first sight appears to contradict the regression results reported below. It does not, and the reason is visible in the third figure: inclusive lending and bank size are correlated at 0.799. The positive pooled correlation between social practice and profitability is substantially an expression of the fact that larger banks both lend more inclusively and are more profitable in cross-section. Once the analysis moves within institutions and controls for scale, that apparent association does not survive, which is a demonstration of why a bivariate correlation is an inadequate basis for inference in a structurally heterogeneous panel.

Diagnostic Tests

Table 3 consolidates the diagnostic results and the estimation response adopted in each case.

Table 3: Diagnostic Test Results and Estimation Responses

Diagnostic issue	Test and result	Decision and estimation response
Multicollinearity	VIF: SOC 1.041; ENV 1.042; GOV 1.002; FSIZE 1.015; mean VIF 1.025	All values far below 5; no multicollinearity; all predictors retained
Homoscedasticity	Breusch–Pagan / Cook–Weisberg $\chi^2 = 18.742$, df = 1, p = 0.000	Constant variance rejected; HC1 robust standard errors adopted
Serial correlation	Wooldridge F = 6.384, p = 0.015	First-order autocorrelation confirmed; robust inference retained
Stationarity	Augmented Dickey–Fuller: ROA -6.016; ENV -6.189; SOC -6.558; GOV -6.227; FSIZE -6.169; 5% critical value -2.86	All series stationary in levels; estimation in levels retained
Estimator selection	Hausman test statistically significant, p < 0.05	Random effects inconsistent; fixed effects estimator adopted

Note. Researcher (2026).

Two results are directly relevant to the interpretation of a null finding. The variance inflation factor for the social variable was 1.041 and the mean across all predictors was 1.025, values so far below any conventional threshold that the insignificance reported below cannot be attributed to collinearity inflating the standard error of the social coefficient. This matters because a null result invites the objection that the estimate is imprecise for mechanical reasons, and the diagnostic evidence excludes that explanation. The Breusch–Pagan test decisively rejected constant error variance and the Wooldridge test confirmed first-order autocorrelation, which is why HC1 robust standard errors were used throughout (Breusch & Pagan, 1979;

Cook & Weisberg, 1983; White, 1980). The Augmented Dickey–Fuller statistic for the social series was -6.558 against a five per cent critical value of -2.86, the strongest rejection of non-stationarity among the five variables, so the null result is not the product of a spurious regression on a non-stationary series. The Hausman test rejected the random effects specification, so all reported estimates identify the relationship from variation within banks over time, with every stable institutional characteristic absorbed into the bank-specific intercept (Hausman, 1978).

Regression Results

Table 4 reports the social coefficient across the three hierarchical models.

Table 4: Hierarchical Panel Fixed Effects Results with HC1 Robust Standard Errors (N = 380)

Variable	Model 1 β	SE	p	Model 2 β	SE	p	Model 3 β	SE	p
Social sustainability practices (SOC)	-0.018	0.013	0.159	-0.011	0.014	0.419	-0.010	0.014	0.445
Firm size (FSIZE)	—	—	—	-0.029***	0.011	0.008	-0.029***	0.011	0.009
SOC $\times$ FSIZE	—	—	—	—	—	—	0.104	0.099	0.293
Within R ²	0.0050	—	—	0.0259	—	—	0.0298	—	—
ΔR^2	—	—	—	0.0209	—	—	0.0039	—	—
F-statistic	0.634	—	0.593	2.488**	—	0.043	1.631	—	0.125

Note. Researcher (2026). ** $p < .05$; *** $p < .01$. Coefficients for the environmental and governance dimensions and their interactions are estimated in every model but are not reported here because they are not the subject of this paper.

The social coefficient was negative and statistically insignificant in every specification. In the direct-effects model it was -0.018 with a robust standard error of 0.013 and a probability value of 0.159. With firm size controlled it was -0.011 with a standard error of 0.014 and a probability value of 0.419. With the interaction terms present it was -0.010 with a standard error of 0.014 and a probability value of 0.445. H_{02} was therefore not rejected.

The stability of the estimate across the three models is itself informative and distinguishes this result sharply from the behaviour of the environmental dimension in the same panel. The introduction of firm size, which raised the within R^2 from 0.0050 to 0.0259 and which materially altered other coefficients in the model, moved the social coefficient only from -0.018 to -0.011 and left it insignificant. The social relationship is therefore not confounded by scale in the way that a strongly size-dependent practice would be, notwithstanding the correlation of 0.799 between inclusive lending and bank size; the within-bank variation in inclusive lending is evidently sufficiently independent of the within-bank variation in size for the coefficient to be estimated without material distortion.

The interpretation requires precision, because two misreadings are available and both are wrong. The result does not establish that inclusive lending reduces profitability. The point estimate is negative in every specification, but it is not statistically distinguishable from zero at the five per cent level, and the confidence interval implied by the reported standard errors comfortably includes zero and includes positive values. Nor does it establish that inclusive lending has no relationship with profitability, because a failure to reject a null hypothesis is not evidence in favour of it. The statistically defensible statement is that within the observed range of inclusive lending, and over the

horizon on which annual return on assets is measured, the evidence was insufficient to conclude that social sustainability practices had a systematic direct relationship with financial performance once the other modelled dimensions, firm size and time-invariant institutional heterogeneity were controlled.

Conditional Relationship with Firm Size

The interaction between social sustainability practices and firm size was positive but statistically insignificant ($\beta = 0.104$, $SE = 0.099$, $p = 0.293$), and the interaction block as a whole added only $\Delta R^2 = 0.0039$ and was jointly insignificant ($F = 1.631$, $p = 0.125$). There is therefore no evidence that the relationship between inclusive lending and profitability varies systematically with institutional scale.

This result closes an interpretive avenue that would otherwise remain open. A common explanation for a null unconditional coefficient is that the underlying relationship is adverse in one part of the sample and favourable in another, so that an estimate averaging across the conditioning variable approaches zero even where the relationship is strong at both extremes. Had the interaction been significant, the null direct effect would have been an artefact of aggregation. It was not, and the positive sign of the interaction coefficient, though insignificant, is at least consistent with the theoretical expectation that larger institutions absorb and diversify the credit risk of inclusive exposures more readily. What the evidence establishes is that this advantage, if it exists, is not large enough to be detected in a panel of this size, and that the null result is a property of the relationship rather than a consequence of averaging across heterogeneous institutions.

Robustness Analysis

Table 5 reports the social coefficient under three alternative specifications.

Table 5: Robustness Checks Using Alternative Estimators and Sub-Period Analysis

Specification	SOC β	p	Model R^2
Panel fixed effects (Model 2, main specification)	-0.011	0.419	0.0259
Pooled ordinary least squares	-0.014	0.352	0.1743
Two-way fixed effects with year dummies	-0.017	0.290	0.2382
Fixed effects, post-2021 sub-period	0.031	0.111	—

Note. Researcher (2026).

The null result proved unusually stable. Pooled ordinary least squares, which identifies the relationship principally from differences between banks, returned a negative and insignificant coefficient ($\beta = -0.014$, $p = 0.352$) despite a much higher R^2 of 0.1743 attributable to between-bank variation. Two-way fixed effects with year dummies, which additionally removes variation common to the sector in a given year, returned a negative and insignificant coefficient ($\beta = -0.017$, $p = 0.290$) on an R^2 of 0.2382. That three estimators identifying the relationship from three different sources of variation return coefficients of similar magnitude and uniform insignificance is stronger evidence than any one of them alone, and it excludes the possibility that the main result is an artefact of the fixed effects specification.

The sub-period analysis is the one point at which the pattern shifts, and its interpretation must be careful. Restricting estimation to the period following October 2021 reversed the sign of the coefficient to positive ($\beta = 0.031$) and reduced the probability value to 0.111, which remains above the five per cent decision threshold. The change is directionally suggestive and worth reporting, since it is the only specification in which the social coefficient is positive, but it does not attain significance and the sub-period contains too few observations to support a confident conclusion. The defensible statement is that the null result holds across the study period and that a positive relationship in the most recent years cannot be excluded and warrants examination as further reporting years become available.

Discussion

The finding requiring explanation is a coefficient that is consistently negative in sign, uniformly insignificant across estimators, sub-periods and specifications, and stable in the presence of a variable that materially altered other relationships in the same model. Four explanations plausibly account for it, and they are not mutually exclusive.

The first, and the most substantively persuasive, is the credit-risk and pricing trade-off inherent in directed inclusive lending. The borrower segments constituting the social measure serve genuine developmental objectives and align with the financial-inclusion agenda that Kenyan policy has pursued, but they simultaneously expose banks to above-average credit

risk. These borrowers frequently lack registered collateral, generate informal or irregular income, have shorter credit histories, and default at higher rates than corporate and prime retail exposures, so the provisioning charge attributable to the inclusive book is heavier. A material share of Kenyan directed inclusive lending has moreover been originated through government credit guarantee schemes, subsidized credit lines and Central Bank-mandated programmes that prescribe concessional interest rates and thereby reduce the net interest income the exposure generates. Where the relationship and reputational benefits that Stakeholder Theory identifies are real but of comparable magnitude to these costs, the coefficient recovered by a linear model is their net effect, and an estimate near zero is precisely what approximately offsetting channels produce.

The second is temporal mismatch between the theorized mechanism and the measurement horizon. The benefits of inclusive lending that the theoretical literature identifies, comprising customer loyalty, portfolio diversification, reputational gain and the eventual graduation of successful borrowers into higher-value commercial products, accumulate as a stock over periods that may extend well beyond a decade, whereas the costs are recognized as a flow within the year in which the credit is extended. An annual accounting measure of profitability is structurally better suited to detecting the cost than the benefit. The ten-year window used here is the longest available for this research context but may still be insufficient to capture lagged profitability effects.

The third is measurement scope, and it is the limitation that most directly qualifies the conclusion. The inclusive lending ratio captures the volume of directed credit but not the quality, depth or reputational dimension of social engagement. It excludes employee welfare and remuneration practice, community investment, consumer protection standards, digital financial inclusion, financial literacy programmes and the breadth of stakeholder engagement, all of which fall within the social construct as the theoretical literature defines it. A volume-based proxy will estimate an attenuated relationship whenever the components it omits carry effects of a different sign or magnitude from the component it captures, and the finding should therefore be read as an estimate of the

effect of inclusive lending rather than of social sustainability practice in the round.

The fourth is developmental stage. Social sustainability practice in Kenyan banking may still be in a transitional phase in which it is implemented primarily for compliance and reputational purposes rather than integrated into the core business model as a strategic source of return. Where that is so, the practice generates cost without the accompanying commercial design that would convert it into revenue, and its integration may not yet be sufficiently advanced to register in profitability.

The finding is consistent with a substantial body of prior evidence. It aligns closely with Tandelilin and Usman (2023), who found social impact and corporate social responsibility reporting negatively associated with bank performance across five ASEAN economies on both accounting and market measures, and with Matuszak and Róžańska (2017) in Polish institutions. It is consistent with Nobanee and Ellili (2017), who found no dimension significant in the United Arab Emirates, and with Saadaoui and Ben Salah (2023), who found the social dimension insignificant while the environmental dimension carried a significant coefficient, which is the same dimensional pattern this study recovers. It sits alongside AlAjmi et al. (2023), Giannopoulos et al. (2024) and Halim et al. (2024), whose negative composite findings are compatible with a social dimension that contributes nothing positive to the aggregate.

It diverges from Gutiérrez-Ponce and Wibowo (2023), Moufty et al. (2021), Jan et al. (2019), Zyadat (2017), Al-Dhaimesh and Al Zobi (2019), Zafar et al. (2022) and Shakil et al. (2019), all of whom reported positive social effects. Three differences plausibly account for the divergence without requiring either body of work to be in error. The measurement of the social construct differs: this study used the composition of the loan book, whereas most of these studies used disclosure indices, survey ratings or composite scores that reflect the communication of social engagement rather than the extension of credit to underserved borrowers, and a bank may score well on the former while the latter carries a provisioning cost. The institutional setting differs: Kenyan inclusive lending operates under an explicit developmental mandate with concessional pricing embedded in directed schemes, a structure with no close counterpart in the European, ASEAN or Gulf

settings from which much of the positive evidence derives. And the estimator differs: several of the positive findings derive from cross-sectional or pooled designs identifying the relationship from between-institution differences, and the pooled specification reported in Table 5 shows that even in the present data the between-bank correlation is positive at 0.298 while the within-bank relationship is not.

Theoretically, the evidence qualifies rather than refutes Stakeholder Theory. The theory's instrumental claim, that responsiveness to stakeholder expectations yields commercial returns, is not contradicted by a null coefficient over an annual horizon, because the theory identifies mechanisms that operate through the accumulation of relationships and reputation and is silent on the period over which they mature. What the evidence does contradict is the stronger and more commonly asserted version of the claim, that social engagement is contemporaneously profitable. The Legitimacy Theory account fares comparably. Its central proposition, that the financial value of legitimacy-seeking activity depends on the activity being observed, supplies a reason for the divergence between the social and environmental dimensions within this same panel: environmental lending became a matter of standardised supervisory record after 2021 while inclusive lending did not, and the dimension that acquired regulatory visibility is the dimension that acquired a significant coefficient. That contrast is suggestive rather than demonstrative, but it is the interpretation the evidence most naturally supports. The Economies of Scale prediction was tested directly and not supported: the interaction with firm size was insignificant, so the risk-absorption advantage that larger institutions might be expected to enjoy in inclusive lending was not detectable.

Three claims are not supported and should not be inferred. The study does not establish that inclusive lending destroys value, since the coefficient is statistically indistinguishable from zero and its confidence interval includes positive values. It does not establish that banks should curtail inclusive lending, since the practice serves a developmental mandate that is independent of its profitability and since the evidence indicates an approximately neutral rather than an adverse effect on returns. And it does not establish causality, since the fixed effects estimator removes time-invariant confounding but not

simultaneity within a year, and a more profitable bank has greater capacity to extend concessional credit.

Recommendations

The appropriate response to a null finding is not that banks should abandon inclusive lending, which serves a developmental mandate independent of profitability, but that the conditions under which it is undertaken should be altered so that the cost currently offsetting its benefits is reduced.

Bank management should address the credit-risk component of that cost directly. This means improved credit scoring for thin-file borrowers, the systematic use of alternative data in the assessment of small and medium enterprise applications, and the pairing of inclusive credit with non-financial support such as business advisory services and financial literacy programmes that lower the probability of default. The evidence indicates that inclusive lending is currently approximately neutral in its profitability effect; measures that reduce its loss rate would move it into positive territory without any reduction in volume.

Bank boards should hold inclusive lending to an explicit portfolio-quality standard. Non-performing loan ratios within the inclusive book should be monitored separately from the general book, together with origination volumes, pricing and funding costs, so that the source of any profitability drag can be identified rather than assumed. Without this separation the null result documented here cannot be acted upon institutionally, because management cannot distinguish a segment whose losses are excessive from one whose pricing is concessional.

Banks should also broaden the basis on which social performance is managed. Because the measure used here captures volume rather than depth, and because the theorised benefits operate through relationship quality, institutions should develop and track indicators of the depth and durability of inclusive relationships, including borrower retention, product uptake beyond the initial credit facility, and the rate at which inclusive borrowers graduate into higher-value commercial products. These are the channels through which the stakeholder mechanism is theorised to operate, and they are not observable in a lending ratio.

The Central Bank of Kenya, the National Treasury and the Kenya Deposit Insurance Corporation should expand and strengthen credit guarantee mechanisms

for directed inclusive lending. A dedicated government-backed guarantee facility for green and inclusive finance, modelled on comparable instruments in other jurisdictions, would reduce the commercial risk associated with directed lending and enable banks to expand inclusive portfolios without the profitability penalty currently associated with concessional and higher-risk directed credit. The National Treasury should consider extending fiscal incentives to inclusive finance activity, including enhanced tax deductibility for financial literacy and community investment programmes that reduce default risk in the inclusive book.

Regulators should also address the disclosure asymmetry between the sustainability dimensions. Inclusive lending is not reported under a standardised framework comparable to that governing climate-related risk, which limits comparability across institutions, weakens the reputational channel through which the practice is theorised to generate financial value, and constrains research such as this to a single volume-based proxy. Standardising the definition and disclosure of inclusive lending, disaggregated by borrower segment and reported alongside portfolio-quality indicators, would serve investor discipline, supervisory oversight and the evidence base simultaneously.

Future research should address the limitations identified above. Priority should be given to constructing a multi-indicator social index that combines lending composition with employee, community, consumer protection and financial literacy measures, so that the estimate is not confined to directed credit volume; to specifying distributed-lag models capable of detecting benefits that accumulate over periods longer than the annual reporting cycle; to applying instrumental-variable or system generalised method of moments estimation to address the simultaneity that the fixed effects estimator cannot resolve; to obtaining loan-level data that would permit the provisioning cost of the inclusive book to be separated from its revenue contribution directly rather than inferred; and to extending the post-2021 window, where the only positive coefficient in the study was observed, as further reporting years become available.

Contribution of the Study

The study contributes in four respects.

Empirically, it provides the first census-based panel estimate of the effect of inclusive lending on the profitability of Kenyan commercial banks, covering the whole population of 38 licensed institutions across a full decade with complete data coverage. In a field whose evidence base is dominated by studies from Europe, North America and East Asia, and in which African banking evidence has been sparse, it establishes that the social dimension of sustainability practice is not contemporaneously profitable in a banking system operating under an explicit financial-inclusion mandate.

Methodologically, it demonstrates the analytical consequence of the measurement choice by using the composition of the loan book rather than a disclosure index or composite score. The contrast between a positive bivariate correlation of 0.298 and a uniformly insignificant within-bank coefficient establishes that pooled and cross-sectional designs, which dominate the positive findings in this literature, recover a relationship attributable substantially to differences in institutional scale rather than to social practice. The robustness of the null across three estimators identifying the relationship from three distinct sources of variation is stronger evidence than a single specification could provide.

Substantively, it identifies and documents a dimensional divergence within a single banking system: in the same panel, using the same estimator and the same dependent variable, the environmental dimension carried a significant positive coefficient once scale was controlled while the social dimension did not, under any specification. This establishes directly what the composite-score literature can only infer, namely that aggregating the sustainability dimensions into a single index conceals offsetting components, and it supplies an empirical case for disaggregated treatment.

Theoretically, it specifies which elements of the stakeholder and legitimacy accounts survive extension to inclusive lending in an emerging-market banking system. The instrumental claim of Stakeholder Theory is not contradicted but is shown to be silent on the horizon over which its mechanisms mature, which is a limitation of the theory's empirical application rather than of the theory itself. The visibility condition of

Legitimacy Theory is supported indirectly by the divergence between a regulated and disclosed environmental practice and an unregulated and inconsistently disclosed social practice within the same institutions. And the scale prediction of Economies of Scale Theory is directly tested and not supported for the social dimension, the interaction with firm size being insignificant.

Conclusion

This paper examined the effect of social sustainability practices on the financial performance of commercial banks in Kenya, using the inclusive lending ratio and return on assets as measures and a balanced panel of 380 bank-year observations covering all 38 licensed commercial banks over 2015 to 2024.

The evidence does not support a statistically significant effect. The social coefficient was negative and insignificant in the direct-effects model, with firm size controlled, and with the interaction terms present, and the null hypothesis was not rejected in any specification. The result held under pooled ordinary least squares and under two-way fixed effects with year dummies, and the only positive coefficient, observed in the post-2021 sub-period, did not attain significance. The interaction between social practice and firm size was insignificant, so the null result is a property of the relationship rather than an artefact of averaging across institutions of different scale.

Three considerations qualify the non-rejection without overturning it. The inclusive lending ratio captures the volume of directed credit but not the quality or depth of social engagement, so the estimate is properly read as the effect of inclusive lending rather than of social sustainability practice in the round. The benefits the theoretical literature identifies accumulate over horizons that may exceed the annual accounting cycle on which the dependent variable is measured, while the costs are recognised immediately. And the credit-risk and concessional-pricing structure of directed inclusive lending in Kenya generates a cost that plausibly offsets the relationship and reputational benefits within the period observed.

The conclusion for practice follows from the diagnosis rather than from the coefficient. Inclusive lending is approximately neutral in its effect on profitability, not adverse, and it serves a developmental mandate that does not depend on profitability for its justification.

The appropriate response is therefore to reduce the cost that currently offsets its benefits, through better risk assessment of thin-file borrowers, separate portfolio-quality monitoring of the inclusive book, expanded credit guarantee support for directed lending, and standardised disclosure that would allow the practice to generate the reputational value the theory predicts.

The conclusion is bounded by the evidence. It describes robust associations within a 38-bank panel over ten years, estimated from within-bank variation with time-invariant heterogeneity absorbed but simultaneity unaddressed, using a single volume-based measure of a multidimensional construct, and explaining a modest share of the within-bank variation in profitability. A failure to reject a null hypothesis is not evidence in favour of it, and the finding should be read as an absence of detectable contemporaneous effect rather than as a demonstration that none exists.

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