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The Impact of Strategic Intelligence on Sustainable Organizational Performance: The Mediating Role of Social Responsibility Accounting in Saudi Commercial Banks

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Abstract:

This study examines the mediating role of social responsibility accounting in the relationship between strategic intelligence and sustainable organizational performance in commercial banks in Saudi Arabia's Al-Qassim region. Its theoretical framework integrates the Resource-Based View (RBV), Natural Resource-Based View (NRBV), and stakeholder theory, addressing the economic, social, and environmental dimensions of sustainability. Using a descriptive-analytical, quantitative cross-sectional design, the study collected questionnaire data from 290 employees through 60 items. Results indicated positive relationships between strategic intelligence and social responsibility accounting ($B = 0.436$, $p < 0.001$) and sustainable organizational performance ($B = 0.345$, $p < 0.001$). Based on 5,000 bootstrap resamples, the indirect effect through social responsibility accounting was 0.189 (95% CI: 0.132–0.250). The direct effect remained significant ($B = 0.156$, $p = 0.003$), confirming complementary partial mediation. The overall model explained 30.1% of the variance in perceived organizational performance. Accordingly, the study recommends that senior management integrate strategic intelligence skills with the effective use of social and environmental accounting data, while empowering governance committees and internal auditors to verify the reliability of sustainability metrics and assess how resources are allocated and translated into measurable organizational outcomes.

Keywords: strategic intelligence; social responsibility accounting; sustainable organizational performance; mediation; commercial banks; Saudi Arabia.

1. Introduction

Saudi commercial banks need to take into account the overall impact of their lending, investment, hiring, and operations. Their continuity is still focused on their economic performance, while financial measures do not explain their social and environmental responsibilities. Saudi banks' research has explored the link between intellectual capital and sustainable performance with bank-level panel data, highlighting the importance of organizational capabilities in the context of Saudi banks' sustainability (Sayed & Nefzi, 2024). The current research focuses on employees' perceptions of another capability, strategic intelligence, and of the accounting practices which can link up this capability with sustainable performance. This is defined as sustainable organizational performance in terms of economic, social and environmental outcomes. These dimensions expand the measurement of performance beyond just short-term financial results. Hubbard (2009) provides an explanation as to how organizational performance measurement must be flexible enough to include sustainability considerations. However, the three dimensions should not be directly interchangeable quantities, which is the concern raised by critical examination of triple bottom line accounting by Norman and MacDonald (2004).

Strategic intelligence is foresight, systems thinking, visioning, motivation and partnership. These can assist managers to identify new issues, comprehend the consequences of these issues and plan the response. Al-Ameri et al. (2024) investigated these aspects in the textile industry in Iraq and found that they are positively related to organizational performance. Al Shawabkeh (2024) took strategic orientations and business intelligence into consideration as a related study in Jordanian commercial banks. Though these studies provide background, the constructs and settings differ from the one used in the present model.

Strategic intelligence can relate to sustainability decisions through accounting practices. Cost information, use of resources, impacts and responsibilities of the organization is essential for managers to evaluate alternatives. Environmental management accounting separates monetary data from physical data and links monetary data back to managerial action (Burritt, et al., 2002). This study operationalizes the concept of social responsibility accounting in a more comprehensive way that encompasses measurement, disclosure of responsibility-related information, disclosure and use of decisions. Additionally, organizational conditions and the broader institutional context can limit its implementation (Khodamipour et al., 2024).

The study thus investigates the mediation of social responsibility accounting. We suggest that the sequence is that higher strategic intelligence leads to more advanced social responsibility accounting

practices, which in turn are linked to better organizational performance over the long run. Strategic intelligence may also have an indirect connection, through coordination and responsiveness, with other processes. It is a theoretical explanation which will be compared to the observed data, and not an assumption that mediation must be occurring

The aim of the contribution is to link a strategic capability and an accounting mechanism in the context of Saudi banking. The model distinguishes between the accounting for responsibility and the accounting for the general CSR activity, and views sustainable performance as a multidimensional result. The study contributes empirical evidence on these relationships among bank employees in Saudi Arabia.

2. Research Problem and Gap

The literature used in this study reflects those focused on strategic intelligence and performance (Al-Ameri et al., 2024); strategic orientations and sustainable banking performance (Al Shawabkeh, 2024); accounting practices and responsibility or environmental outcomes (Ahmad & Mohamed Zabri, 2024; Appannan et al., 2023). These streams indicate competencies and information practices are relevant. However, they do not directly test the current sequence from strategic intelligence to social responsibility accounting, and then sustainable performance of the employees in the Saudi commercial banks. Direct-effects models show whether strategic intelligence varies with performance but do not specify the role of accounting information. The present study addresses this gap by testing both direct and indirect paths. A similar mediation pathway was found in companies in Malaysia between environmental strategies, environmental management accounting and environmental performance, as shown by Appannan et al. (2023). The current research widens the focus to strategic intelligence and a broader accounting construct related to responsibility. The earlier result does not necessarily specify the exact coefficient or mediation pattern because the results of the studies differ. Because the activities of CSR are not the same as the disclosure of ESG, environmental management accounting or social responsibility accounting, it is essential to use conceptual precision. External reporting is about communicating information to stakeholders, while internal measurement and decision-making support planning and control. These functions are separated from one another within the framework by stating four accounting dimensions. It is based on the decision-oriented environmental accounting approach of Burritt et al. (2002) and the issues of implementation explored by Khodamipour et al. (2024). The research question is that is strategic intelligence directly and indirectly related to sustainable organizational performance through social responsibility accounting in the provided sample in a positive direction? The study focuses on the total SI – performance association, the SI – accounting

association, the accounting – performance association given SI, and on the indirect effect. The following analyses are related to the hypotheses H1–H4. The research question, therefore, is whether the strategic intelligence is directly and indirectly related to the sustainable performance of the Saudi commercial banks by means of social responsibility accounting. The study examines direct path from strategic intelligence to performance, direct path from strategic intelligence to social responsibility accounting, direct path from social responsibility accounting to performance, and the indirect path.

3. Theoretical Foundation:

3.1. Resource-Based and Natural Resource-Based View:

The resource-based view associates sustainable competitive advantage with resources and capabilities that are valuable, rare, hard to imitate, and hard to substitute (Barney, 1991).

Strategic intelligence can be seen as an organizational ability when it serves to interpret and coordinate action. The natural resource-based view generalizes this argument to capabilities that are influenced by natural resource constraints and opportunities (Hart, 1995). These are motivating factors for the proposed model but are not directly tested in the survey. Responsibility-related accounting is generated as an information routine which can facilitate the application of strategic capability to decisions on sustainability.

3.2. Stakeholder Theory:

Stakeholder theory is a framework for recognizing the interests of stakeholders who are impacted by organizational behavior. Donaldson and Preston (1995) differentiate descriptive, instrumental, and normative elements of the theory. Relationship groups in banking may range from shareholders, employees, and depositors to borrowers, regulators, communities, and more. This approach is used in the present model to argue for the inclusion of social and environmental impacts in strategic attention and accounting information, as well as economic outcomes. It is not the aim of this study to represent all stakeholder interests or to solve conflicts between them.

3.3. Triple Bottom Line:

The outcome construct is a combination of perceived economic, social and environmental performance. Economic performance is about continuity and efficiency of the organization; social performance relates to the impact on people and stakeholder management; environmental performance relates to the use of resources and environmental practices. Others, like Hubbard (2009) advocate a more general performance measurement system, and Norman and MacDonald (2004) challenge the notion that there are different sustainability outcomes that can be simplified to a single bottom line.

In this regard, each dimension is reported separately, and an equally weighted item composite is used in the regression model specified.

3.4. Capability Conversion Logic:

Taken together, these theories support a capability-conversion explanation. Strategic intelligence provides the interpretive capability needed to understand future conditions and stakeholder interdependencies. Social responsibility accounting converts relevant interpretations into measures, records, disclosures, feedback, and decision criteria. Sustainable organizational performance reflects the economic, social, and environmental consequences of applying those capabilities.

The model permits both an indirect path through accounting practices and a residual direct path from strategic intelligence to performance. Specifically, the resource-based and natural resource-based views motivate H1, stakeholder theory motivates H3, and the capability-conversion logic motivates H2 and H4.

4. Literature Review and Hypothesis Development

4.1. Strategic Intelligence and Sustainable Organizational Performance:

Strategic intelligence is the ability of an organization to predict significant change, to make sense of important information, to establish an organizationally viable path forward, to align people and relationships, and to act on it. A strategic foresight scan identifies and analyses new risks and opportunities. Systems thinking is an approach that helps recognize patterns, feedback and interdependence between different domains of an organization and environment. Visioning links priorities in the here with there to a future state. But motivation makes direction into employee effort, and partnership unlocks external knowledge, legitimacy and complementary resources for the organization. The structure of these dimensions is similar to the strategic intelligence model explored by Al-Ameri et al. (2024).

The dimensions are relevant to banks as they consider strategic decisions with regard to changes in the market and interdependencies among the organization and its parts. Foresight can help to identify issues that are emerging, systems thinking can help to understand the consequences of these issues, and visioning can help to envision a longer-term direction. Support for implementation may be found in motivation and partnership. In this context, Al-Ameri et al. (2024) offer proof on strategic intelligence and organizational performance, and Al Shawabkeh (2024) offers related evidence on sustainable banking performance. The latter has explored other strategic constructs, which is why it is

considered as adjacent evidence. The resulting hypothesis is about a positive total association for the present model.

H1: Strategic intelligence is positively associated with sustainable organizational performance in Saudi commercial banks.

4.2. Strategic Intelligence and Social Responsibility Accounting:

Social responsibility accounting collects, measures, structures, discloses, and analyses information about an organization's social and environmental activities and impacts. The information may be monetary when costs and benefits can be estimated reliably, or non-monetary when physical

quantities, service outcomes, access measures, or stakeholder effects provide a more defensible representation. Its purpose is not limited to publication. It also supports planning, resource allocation, control, accountability, and organizational learning.

Strategic intelligence should strengthen these practices. Foresight identifies future exposures that require measurement. Systems thinking reveals effects that cross departmental boundaries. Visioning clarifies which indicators should track long-term commitments. Motivation can

improve responsibility for data collection and use. Partnership broadens access to stakeholder information. Research on social responsibility accounting also indicates that implementation depends on regulatory, organizational, professional, and awareness conditions (Khodamipour et al., 2024). The proposed relationship is therefore stated as follows.

H2: Strategic intelligence is positively associated with social responsibility accounting in Saudi commercial banks.

4.3. Social Responsibility Accounting and Sustainable Organizational Performance:

Responsibility-related accounting could enhance cost and impact visibility, facilitate cost-benefit comparisons, and enhance performance review. Ahmad and Mohamed Zabri (2024) explored the link between CSR and performance within SMEs in Malaysia and investigated how management accounting practices are applied in this connection. Appannan et al. (2023) discovered that in between the environmental strategy–performance relationship, some environmental management accounting factors stood in the way. Ellili and Nobanee (2023) studied the sustainability-related reporting and financial performance of UAE banks. The studies are focused on various accounting practices and results, but they contribute to explaining why it is important to investigate whether there is a relationship between social responsibility accounting and sustainable performance after controlling for strategic intelligence.

H3: Social responsibility accounting is positively associated with sustainable organizational performance after controlling for strategic intelligence in Saudi commercial banks.

4.4. Mediating Role of Social Responsibility Accounting:

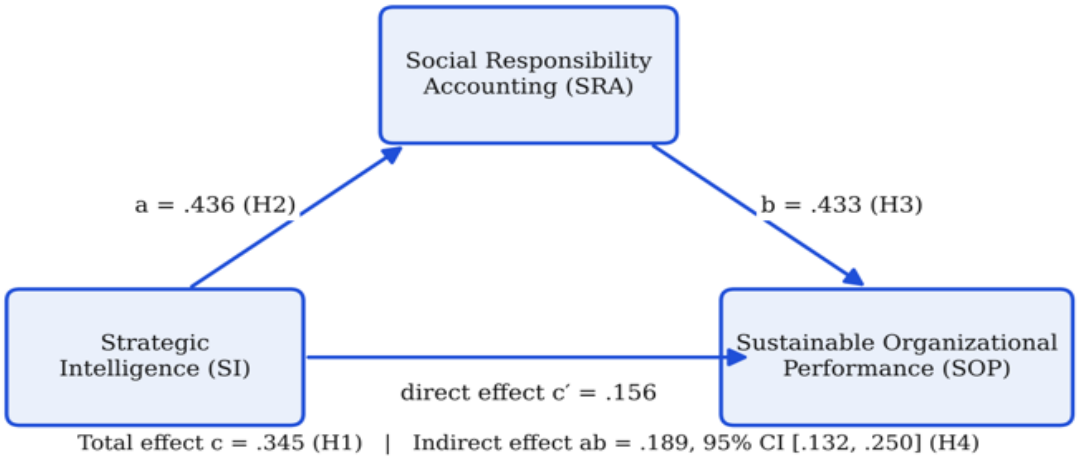
The mediation argument deals with the possibility that accounting practices explain some of the relationship between strategic intelligence and performance. Strategic intelligence could help to uncover the concerns, and responsibility-related measurement/Information use could link the concerns with planning and evaluation. Such an indirect route can be considered based on the related evidence of environmental accounting (Appannan et al., 2023). An indirect effect is evaluated by multiplying the SI-accounting coefficient with the conditional accounting–performance coefficient and is not assumed to be normally distributed (as would be required by the direct product). Instead, it is evaluated using a bootstrap interval (Preacher & Hayes, 2008).

The model allows for a residual direct association, while there is no a priori assumption about the nature of a partial or full mediation. If the indirect effect is positive and the direct effect is positive, then this would be consistent with a complementary partial mediation. This statistical pattern can be identified using a cross-sectional design, but not temporal ordering or causal mediation (Maxwell & Cole, 2007).

H4 Social responsibility accounting statistically mediates the positive association between strategic intelligence and sustainable organizational performance in Saudi commercial banks.

5. Conceptual Framework:

Figure 1: Proposed conceptual framework (path diagram with the estimated coefficients)



- Dimensions of the study constructs

Strategic intelligence	Social responsibility accounting	Sustainable organizational performance
Strategic foresight Systems thinking Visioning Motivation Partnership	Cost and impact measurement Responsibility-related information Disclosure Decision use	Economic performance Social performance Environmental performance

Paths H2 and H3: SI → SRA → SOP. Total association H1: SI → SOP. Indirect effect H4: a × b.

H1 refers to the total SI–SOP association. H2 is path a from SI to SRA. H3 is path b from SRA to SOP conditional on SI. H4 is the indirect effect ab. The outcome regression also estimates the remaining direct association c′. SI = strategic intelligence; SRA = social responsibility accounting; SOP = sustainable organizational performance.

6. Methodology:

6.1. Research Design:

The study adopted the descriptive-analytical method. This method involves collecting, organizing, and analyzing data and information to achieve an accurate description of the relationships between variables and to identify the degree of correlation among them. The design is cross-sectional and correlational and tests a mediation model.

Analyses focused on relationships among composite scores at the respondent level, rather than on objective changes in bank performance. (Maxwell & Cole, 2007)

6.2. Population and Sampling:

6.2.1. Study Population and Sample:

The target population comprised employees in commercial banks in the Qassim Region of Saudi Arabia who could provide relevant information on strategic intelligence practices, social responsibility accounting, and sustainable organizational performance. The study employed a non-probability convenience sampling technique to recruit participants. Data were collected using an electronic questionnaire distributed through professional networks. Participation was voluntary, and the questionnaire covered issues related to strategic practices, social responsibility accounting, and organizational performance. A total of 290 responses were collected and subjected to screening

procedures to assess their suitability for analysis. Following the screening process, all 290 responses were retained for the final analysis, as none were excluded. The demographic characteristics collected included gender, age, educational qualification, job title, department, and work experience. These characteristics were coded into categorical variables in the dataset to facilitate statistical analysis and describe the sample. The study was conducted in accordance with the applicable institutional ethical requirements. Ethical approval was granted by the Standing Committee for the Ethics of Scientific Research at Qassim University under approval number (26-34-283).

Respondents were employed in approximately 10 commercial banks in the Qassim Region. Data were collected in 2026 through an electronic questionnaire shared via the researchers' professional networks. As the link was circulated through these networks, the number of people who received it could not be determined, and a response rate could not be calculated.

6.3. Measurement:

There are six demographic variables, and 60 measurement items (Q7 to Q66) Items were rated on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). The scoring scheme is based on the consecutive 25-item, 20-item and 15-item blocks. The means for strategic intelligence are Q7–Q31, social responsibility accounting for Q32–Q51, and sustainable organizational performance for Q52–Q66. There are 5 consecutive questions each in the 12 dimensions. The higher the score, the more positive the response, and Q66 is a positively worded question, so it was not reversed. The three scales were developed by the researchers based on the literature & the questionnaire was reviewed by a panel of academic experts, and their comments were used to revise the items before data collection.

6.4. Statistical Analysis:

The analysis was performed in Python using NumPy and SciPy. Ordinary least squares regressions were estimated. The twelve - dimension scores were used to analyze screening for missing data, integer range, duplicate identifiers, identical response pattern, straight lining, and Mahalanobis distances. Raw-score Cronbach's alpha and corrected item-total correlations were used to check for reliability. Alpha is a measure of internal consistency and does not provide construct validity (Tavakol & Dennick, 2011). Factorability was determined by KMO and Bartlett statistics. A correlation matrix of 60 items was used to calculate an unrotated principal component diagnostic (no claim was made to a validated factor structure). The absolute item correlations were used to compute HTMT values, as supplementary descriptive separation checks (Henseler et al, 2015). Spearman correlations were used in addition to Pearson correlations. There are three regressions conducted: one for the total SI–SOP association,

one for the SI–SRA association, and one for the SOP model with both SI and SRA. All tests were conducted at the 5% level of significance ($\alpha = .05$). The regression tables include unstandardized B, the standard error, standardized β, t test, confidence intervals, and model fit. The conventional results were complemented by HC3 standard errors and heteroscedasticity diagnostics. The indirect effect ab was calculated by using 5,000 independent case-resampling bootstrap draws and 95 percent percentile intervals (Preacher & Hayes, 2008), with NumPy seed 20261013. The eight cases flagged by Cook's D in the outcome model and the sensitivity analyses not included Q66 in the performance item mean were not included. These were not changes to the main dataset, but rather separate checks. No unplanned covariates were added to the demographics. (Podsakoff et al., 2003; Maxwell & Cole, 2007).

7. Results

7.1. Data Screening:

There were 290 cases in the file and 17,400 measurements. There were no fractional values for any of the measurements. No situation of duplicate identifiers, identical complete item patterns or straight-lined 60 item cases was identified. The maximum Mahala Nobis distance squared was 30.225, below the $\chi^2(12)$ cutoff of 32.909 at $p < .001$. This check did not find an automatic exclusion case. The Cook's D values for the eight cases in the outcome regression were greater than the Cook's D screening value of 4/290, and no case had a Cook's D greater than 1. These observations were included in the primary analysis and analyzed separately for the sensitivity analysis. These values represent the sample's perceptions and should not be viewed as audited bank performance. No test of differences between dimension means was performed, only rankings that indicated differences between sample means.

7.2. Respondent Profile:

The profile includes variation in gender, age, education, job level, department, and professional experience. Male respondents, bachelor's degree holders, operational employees, and respondents with fewer than ten years of experience form the largest categories.

Table 1: respondent characteristics

Variable	Category	n	%
Gender	Male	207	71.4
	Female	83	28.6
Age	Less than 30	81	27.9

	30 to less than 40	105	36.2
	40 to less than 50	74	25.5
	50 and above	30	10.3
Education	Diploma	13	4.5
	Bachelor	161	55.5
	Master	94	32.4
	Doctorate	22	7.6
Job title	Employee	109	37.6
	Supervisor	90	31
	Section head	42	14.5
	Manager	39	13.4
	Department director	10	3.4
Department	Operations	85	29.3
	Human resources	39	13.4
	Finance	41	14.1
	Information technology	33	11.4
	Risk management	50	17.2
	Marketing	42	14.5
Experience	1 to less than 5 years	85	29.3
	5 to less than 10 years	89	30.7
	10 to less than 15 years	74	25.5
	15 years and above	42	14.5

Table 2a: Strategic intelligence and its dimensions

Dimension or construct	Items	Mean	SD	Alpha
Strategic foresight	Q7–Q11	3.267	0.871	0.819
Systems thinking	Q12–Q16	3.341	0.925	0.842
Visioning	Q17–Q21	3.246	0.930	0.852
Motivation	Q22–Q26	3.215	0.898	0.836
Partnership	Q27–Q31	3.288	0.878	0.809
Strategic intelligence	Q7–Q31	3.271	0.724	0.934

Overall mean for Strategic Intelligence was 3.271 (SD = 0.724). The dimension means with the highest were recorded for systems thinking (3.341), partnership (3.288), strategic foresight (3.267), visioning (3.246) and motivation (3.215). The pattern indicates that the average views on the five dimensions are fairly comparable and that the difference between the extremes is not large. The alpha coefficients for the dimensions ranged from .809 to .852 with overall alpha equal to .934. These values demonstrate consistent scores on a scale but do not demonstrate unidimensionality of the full construct (Tavakol & Dennick, 2011).

Table 2b: Social responsibility accounting and its dimensions:

Dimension or construct	Items	Mean	SD	Alpha
Cost and impact measurement	Q32–Q36	3.235	0.882	0.828
Responsibility-related accounting information	Q37–Q41	3.234	0.869	0.795
Disclosure	Q42–Q46	3.219	0.819	0.783
Decision use	Q47–Q51	3.258	0.850	0.775
Social responsibility accounting	Q32–Q51	3.237	0.709	0.913

The overall mean of social responsibility accounting was 3.237 with SD 0.709. The highest-rated dimension was decision use (3.258), followed by cost and impact measurement (3.235), responsibility related information (3.234), and disclosure (3.219). The limited range indicates that the respondents did not report any significant disparity in the four accounting functions. They had alpha coefficients ranging from .775 to .828, and an overall alpha of .913.

Table 2c: Sustainable organizational performance and its dimensions:

Dimension or construct	Items	Mean	SD	Alpha
Economic performance	Q52–Q56	3.220	0.834	0.777
Social performance	Q57–Q61	3.247	0.857	0.796
Environmental performance	Q62–Q66	3.031	0.728	0.642
Sustainable organizational performance	Q52–Q66	3.166	0.676	0.867

The overall mean of Sustainable organizational performance was 3.166 (SD = 0.676). Social performance (3.247) and economic performance (3.220) were scored higher than environmental (3.031) performance. Overall alpha was .867. The economic and social alpha were .777 and .796, respectively, and the environmental alpha was .642. With the exception of the Q66, there was a fairly

close agreement among the other four items, so that caution is required in generalizing for the environmental mean and reliability.

7.3. Preliminary Measurement Checks:

No CFA fit statistics, AVE or composite reliability estimates are reported because a confirmatory measurement model was not estimated.

The mean of Q66, within its environmental dimension, was 2.186 and the corrected item–total correlation was −.075. Correlations for the corresponding items (Q62–Q65) were between .502 and .588. When Q66 was removed, environmental alpha went from .642 to .791. As the researcher indicated it was a positive worded question, reverse coding was not used. The primary analysis includes all the 60 items. Alpha improvement following deletion alone is not enough to conclude that the item should be deleted. Q66 was therefore retained in the primary analysis because it was designed as a positively worded item and no coding error was identified. A sensitivity analysis excluding Q66 (Table 9) yielded the same pattern of results. Findings concerning the environmental dimension should be interpreted with caution.

Table 3: Preliminary measurement diagnostics

Diagnostic	Value	Interpretation
KMO	0.918	Adequate shared item variance
Bartlett χ^2 (df = 1770)	8153.248	$p < .001$
First unrotated component	24.61%	Limited common-source diagnostic
Environmental alpha	0.642	Below the .70 reference point
Q66 corrected item–total r	−.075	Item-level inconsistency
Environmental alpha without Q66	0.791	Sensitivity results only

7.4. Correlations:

The constructs were positively correlated, and the main constructs were correlated with one another. SI correlated with SRA at r = .446 and with SOP at r = .369. The level of correlation between SRA and SOP was .528. P values were all < .001 for all Pearson tests. Spearman coefficients were .422, .369, and .513 in the same order, also with $p < .001$. Thus, the positive bivariate pattern was not dependent on using Pearson correlation. Association is measured by the coefficients, but not the direction of causality.

Table 4: Correlations and supplementary construct separation

Construct pair	Pearson r	Spearman ρ	HTMT
SI–SRA	0.446	0.422	0.483
SI–SOP	0.369	0.369	0.414
SRA–SOP	0.528	0.513	0.604

Note. All Pearson and Spearman correlations have $p < .001$. SI = strategic intelligence; SRA = social responsibility accounting; SOP = sustainable organizational performance. HTMT uses absolute item correlations.

HTMT values were .483 for SI–SRA, .414 for SI–SOP, and .604 for SRA–SOP. They are lower than the descriptive reference point of .85 discussed in the literature dealing with the HTMT (Henseler et al., 2015). These calculations are provided as additional separation tests but should not be used as an alternative to the validation of a hierarchical measurement model. There was minimal collinearity in the outcome regression as both predictors had a VIF < 2. The VIFs for both predictors in the outcome regression were less than 2 (1.248) and there was minimal collinearity in the estimated model.

7.5. Regression and Mediation Results:

The total-effect model showed a positive SI–SOP association, $B = .345$, $SE = .051$, $\beta = .369$, $t(288) = 6.735$, $p < .001$. It explained 13.6% of the variance in SOP, $F(1, 288) = 45.360$, $p < .001$. The mediator model also showed a positive SI–SRA association, $B = .436$, $SE = .052$, $\beta = .446$, $t(288) = 8.456$, $p < .001$, with $R^2 = .199$ and $F(1, 288) = 71.508$, $p < .001$. These results support H1 and H2 at the level of respondent perceptions.

When SI and SRA were included together, SRA remained positively associated with SOP, $B = .433$, $SE = .053$, $\beta = .453$, $t(287) = 8.224$, $p < .001$. SI retained a smaller direct association, $B = .156$, $SE = .052$, $\beta = .167$, $t(287) = 3.021$, $p = .003$. The outcome model explained 30.1% of SOP variance, with adjusted $R^2 = .296$ and $F(2, 287) = 61.742$, $p < .001$. The SRA coefficient was larger in standardized terms, but no formal test of the difference between predictor coefficients was conducted.

Table 5: Ordinary least squares coefficients

Model and predictor	B	SE	B	t	p
Total effect Constant	2.039	0.171	—	11.894	< .001
Total effect SI	0.345	0.051	0.369	6.735	< .001
Mediator Constant	1.809	0.173	—	10.464	< .001

Mediator SI	0.436	0.052	0.446	8.456	< .001
Outcome Constant	1.255	0.181	—	6.918	< .001
Outcome SI	0.156	0.052	0.167	3.021	0.003
Outcome SRA	0.433	0.053	0.453	8.224	< .001

Note. SE and t use conventional OLS covariance estimates. 95% confidence intervals are based on conventional OLS standard errors; HC3 estimates are reported in the text below Table 8. All models use N = 290.

Table 6: Regression model summaries

Model	R^2	Adjusted R^2	F	df	P
Total effect	0.136	0.133	45.360	1, 288	< .001
Mediator	0.199	0.196	71.508	1, 288	< .001
Outcome	0.301	0.296	61.742	2, 287	< .001

The indirect effect ab was 0.189, with bootstrap SE = 0.030 and 95% percentile bootstrap CI [0.132, 0.250]. The interval excluded zero and supported H4. The positive significant direct association remained after SRA was included, making the pattern consistent with complementary partial mediation. The indirect-to-total ratio was 54.8%. This ratio describes the decomposition of the fitted association and should not be interpreted as a causal percentage of bank performance generated through accounting.

Table 7: Bootstrap total direct and indirect effects

Effect	Estimate	Boot SE	95% lower	95% upper
Total effect c	0.345	0.047	0.252	0.436
Direct effect c prime	0.156	0.048	0.063	0.252
Indirect effect ab	0.189	0.030	0.132	0.250

Note. N = 290; 5,000 case-resampling draws; percentile intervals; NumPy seed 20261013. Estimates are unstandardized. Bootstrap uncertainty is reported for all three effects. The indirect effect equals a × b, and c = c′ + ab within numerical precision.

Table 8: Hypothesis testing summary

Hypothesis	Relationship	Evidence	Decision
H1	SI–SOP total	B = .345; p < .001	Supported

H2	SI–SRA	B = .436; p < .001	Supported
H3	SRA–SOP given SI	B = .433; p < .001	Supported
H4	SI–SRA–SOP indirect	ab = .189; CI [.132, .250]	Supported

The conventional and HC3 analyses gave the same significance decisions. In the outcome regression, HC3 SE was .049 for SI and .051 for SRA, with p = .002 and p < .001, respectively. Breusch–Pagan tests did not identify heteroscedasticity in the total, mediator, or outcome models (p = .691, .397, and .878). The outcome-model residual Shapiro–Wilk test had p = .221, whereas the total-effect residual test had p = .024. Accordingly, normality was not assumed to be demonstrated for every model. Bootstrap inference and robust standard errors provide useful supplementary checks. Respondents' bank affiliation was not recorded, so clustering of responses within banks could not be assessed.

7.6. Sensitivity Analyses:

Table 9: Sensitivity analyses

Analysis	N	Direct B	Indirect ab	95% bootstrap CI
Primary all 60 items	290	0.156	0.189	[0.132, 0.250]
Without Q66	290	0.164	0.208	[0.146, 0.275]
Without eight Cook flags	282	0.149	0.202	[0.144, 0.265]

Excluding Q66 from the SOP item mean produced an indirect effect of .208, 95% CI [.146, .275], and a direct coefficient of .164, p = .003. This is a 14-item sensitivity composite, not the primary 15-item SOP measure. Excluding the eight outcome-model Cook's D flags produced an indirect effect of .202, 95% CI [.144, .265], and a direct coefficient of .149, p = .004, with N = 282. Both separate checks retained a positive significant indirect effect and a positive significant direct association. Each used 5,000 percentile-bootstrap draws, with seeds 20261014 and 20261015, respectively. The main reported coefficients continue to use all 290 cases and all 60 items.

8. Discussion

8.1 Strategic Intelligence and Sustainable Performance:

The overall positive total association indicates that the more positive the strategic intelligence the more positive the sustainable performance was reported. In the simple regression model, SI explained 13.6% of the variance in SOP. When SI and SRA were included together, the explained variance increased to 30.1%. Note that 13.6% does not represent a level of statistical significance; rather, it is the proportion of variance explained by the simple regression model. The effect of capital structure

and technology, governance, market conditions and other unobserved organizational features are not separated out. The direction aligns with the strategic intelligence–performance results of Al-Ameri et al. (2024). Commercial banking offers related evidence by Al Shawabkeh (2024) who dealt with orientations of strategic and the moderating role of business intelligence. There are other accounting pathways in the present research that do not claim direct replications across settings. The literature comparison is not a comparison of measures or effect sizes but the direction and conceptual relevance of the relationships.

8.2. Strategic Intelligence and Social Responsibility Accounting:

SI was positively related to SRA with standardized coefficient of .446 and $R^2 = .199$. This is in line with the proposition that strategic attention is linked to information routines that facilitate accountability and decision making. Still, it may be that, in the end, banks with better governance and/or resources will be able to develop both capacities, and/or that accounting practices currently in place will make the strategic information better. These alternatives are not distinguished in the cross-sectional regression.

The issues that Khodamipour et al. (2024) find with regard to responsibility accounting include awareness and institutional/organizational barriers. Their study is supportive for consideration of implementation conditions but does not test the current SI–SRA path. Thus, the current finding brings associational evidence to the proposed relationship, which is sample specific. A practical consideration is to look at whether strategic reviews result in specific information requirements that the accounting and sustainability teams can meet.

8.3. Social Responsibility Accounting and Sustainable Performance:

SRA was positively associated with SOP after controlling for SI ($\beta = .453$), while SI retained a smaller direct association ($\beta = .167$). This pattern is consistent with responsibility-related information feeding into sustainability decisions. It should not be read as evidence of the relative importance of accounting over strategic intelligence, since the coefficients depend on the measures used.

The related evidence on environmental accounting as an intermediate process is provided by Appannan et al. (2023) and Ahmad and Mohamed Zabri (2024) on management accounting in CSR–performance relationship. Ellili and Nobanee (2023) analyses the reporting and monetary performance of banks in UAE. In the present construct, the disclosure and the internal measurement and use of decision making is included, as well as social and environmental perceptions as an outcome. These differences account for the value added by the study and provide some boundaries for comparisons with previous coefficients.

8.4. Mediating Role of Social Responsibility Accounting:

The indirect effect of .189 and its bootstrap interval support the hypothesized accounting pathway. Fitted indirect component accounted for 54.8% of the overall SI–SOP association. The direct effect remained positive and statistically significant after SRA was included, indicating that SRA did not fully account for the SI–SOP association. This statistical decomposition provides more information in the model than what was provided in the bivariate association but is also sensitive to the measurement of the data and causal assumptions of the design.

The sensitivity checks do not address the lack of stability in Q66 or establish temporal ordering. Maxwell and Cole (2007) demonstrate the reasons why the estimates from cross sections might underestimate the mediation in the longitudinal design. The interpretation here is that the sample is consistent with a proposed mechanism that is worthy of further testing with stronger measurement evidence, and data collected at other times.

9. Implications

9.1. Theoretical Implications:

The results offer associational support for the assignment of a strategic capability to an accounting information process. Resource-based reasoning encourages focus on the competence of organizations, and the natural resource-based view provides environmental issues with a role in strategy formulation (Barney, 1991; Hart, 1995). The model proposes that information about responsibility can be part of the application of strategic capability. It does not directly assess complete assumptions of both theory and demonstrate that the assumed process creates competitive advantage.

Stakeholder theory helps to understand why it is important to provide information on consequences that are not just monetary (Donaldson & Preston, 1995). The overall performance system provides for the inclusion of economic, social, and environmental perceptions, and maintains separate reporting (Hubbard, 2009). The theoretical contribution is a relationship between these constructs that is specified for the current context. More proof is needed of their measurement structure and the sequence of the proposed process for confirmation.

9.2. Practical Implications:

These results indicate the need for banks to consider strategic intelligence and responsibility related accounting as a single entity. Strategic review concern can be associated with a defined measure, a responsible information owner and a managerial decision. The pattern observed is just a practical

implication and does not imply that these procedures have already been implemented by the banks that were surveyed. Priorities need to be aligned with the bank's governance processes and information needs.

Accounting, strategy, risk and sustainability roles can ask if monetary and non-monetary information is based on consistent definitions and inform decision making and disclosure. Information for an indicator should provide managers with enough information to understand what it measures and from where it is drawn. There is also a measurement implication in the study: it is important to review the items before the environmental dimension can be used to support strong substantive conclusions. Operational priorities should not be set based on the lower environmental mean.

10. Recommendations:

1. Connect strategic reviews with a documented list of social and environmental information needs. For each material issue, identify an indicator, data source, responsible function, and review schedule.

2. Agree on consistent definitions for responsibility-related costs, impacts, and performance indicators across finance, accounting, sustainability, risk, and strategy functions.

3. Evaluate how responsibility-related information is used in budgeting, project appraisal, and performance review. Assess its practical relevance rather than relying only on its inclusion in external reports.

4. Develop staff capability to interpret sustainability indicators and apply them to specific planning and control decisions. Training priorities should follow identified information gaps.

5. Review the traceability of responsibility-related figures from source information to managerial reports and disclosures. Use governance and internal audit processes appropriate to the bank.

11. Limitations and Future Research:

The cross-sectional design constrains how far causal relationships can be inferred.

The study used a non-probability convenience sample from the Qassim Region, which limits generalization to all Saudi commercial banks. Respondents were not identified by bank, so clustering could not be assessed. Data are self-reported from a single source, the environmental dimension showed lower reliability ($\alpha = .642$) driven by item Q66, and no confirmatory factor analysis was conducted.

Longitudinal research could trace changes in sustainability reporting over time. Reliance on self-reported data from a single respondent pool may also introduce common method bias; future studies

could mitigate this risk by incorporating objective indicators from banks' financial reports. Comparisons among financial institutions across Gulf Cooperation Council countries could establish whether regional regulatory differences shape the relationships observed in this study. In-depth interviews with senior executives could further illuminate the organizational barriers and cultural factors influencing the integration of strategic intelligence and social responsibility accounting in Saudi banks. Future studies should also use validated measurement models, information from multiple sources, and temporally separated observations to examine the proposed mediation process more directly. Addressing these limitations would advance understanding of how strategic capabilities relate to sustainable organizational performance in evolving financial markets.

12. Conclusion

The study was based on 290 responses from participants who were asked about the strategic intelligence, social responsibility accounting, and sustainable organizational performance. The primary analysis included all 290 cases and all 60 items. All variables were presented in terms of their dimensions, and the data were interpreted as the perceptions of the respondents (not the actual level of the bank).

Positive relationships were found between strategic intelligence and performance, and strategic intelligence and social responsibility accounting. After controlling for strategic intelligence, accounting continued to have a positive relationship with performance. The indirect effect was .189 with a 95% bootstrap interval of [.132, .250] and the other direct coefficient was .156, $p = .003$. Findings are in line with complementary partial mediation. The two predictors accounted for 30.1% of the variance in the performance composite.

The observed pattern indicates the need for an examination of the accounting as an information process between strategic capability and sustainability decisions as a process of responsibility. It does not rule out causal mediation or full measurement validity. In particular the environmental dimension and Q66 warrant caution in interpretation.

The study used a non-probability convenience sample from the Qassim Region, which limits generalization to all Saudi commercial banks. Respondents were not identified by bank, so clustering could not be assessed. Data are self-reported from a single source, the environmental dimension showed lower reliability ($\alpha = .642$) driven by item Q66, and no confirmatory factor analysis was conducted. The main mediation pattern was stable across sensitivity analyses within this dataset.

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