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Evaluating Social Return on Investment (SROI) in a Corporate Social Responsibility Program for Riverside SMEs in Post-Pandemic Indonesia: Evidence from the Extractive Sector

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Abstract

This study evaluates the social, economic, and environmental value generated by a corporate social responsibility (CSR) initiative implemented by a major extractive-industry firm to support riverside micro-entrepreneurs in post-pandemic Indonesia. Utilizing the Social Return on Investment (SROI) framework developed by Social Value UK, the research adopted a mixed-methods approach, combining interviews, focus group discussions, and secondary data collected from 2020 to 2023. The SROI analysis revealed that the program generated a total social benefit of IDR 5.56 billion against an investment of IDR 4.52 billion, yielding an SROI ratio of 1.23. Key outcomes included increased SME turnover, improved hygiene practices verified through certification, and strengthened community resilience. The Theory of Change (ToC) and a self-developed Social Ripple Effect Model for Riverside Micro-Entrepreneurship (SREM-RM) were applied to trace transformation pathways from inputs to long-term impacts. The findings highlight the strategic role of CSR in empowering micro-enterprises during crisis recovery and provide methodological insights for integrating SROI with ToC in impact evaluation. Policy implications emphasize the importance of digital inclusion, institutionalized support systems, and expanded access to microfinance for sustainable SME development.

Keywords: Social Return on Investment, Corporate Social Responsibility, SMEs, Post-Pandemic Recovery, Theory of Change

A. INTRODUCTION

Small and Medium Enterprises (SMEs) are widely recognized as vital contributors to economic growth, employment generation, and poverty reduction, particularly in developing economies such as Indonesia. According to Sugiri (2020), SMEs form the backbone of the national economy, accounting for more than 99% of businesses and employing over 97% of the workforce. However, the COVID-19 pandemic severely disrupted this sector, leading to declining revenues, constrained supply chains, and heightened bankruptcy risks (Hardilawati, 2020). Among the most affected were informal street vendors operating along urban and peri-urban riverbanks, whose livelihoods were jeopardized by restricted mobility and reduced consumer activity. In response to these challenges, a large extractive-industry firm in Indonesia implemented a targeted Corporate Social Responsibility (CSR) initiative to revitalize riverside micro-enterprises during the pandemic recovery period. The program, launched in 2020, focused on improving business infrastructure by providing standardized vendor booths, hygiene mentoring in collaboration with public health institutions, waste management support, and digital promotion to strengthen the resilience and visibility of local entrepreneurs.

The role of CSR in fostering community resilience and inclusive growth has been widely acknowledged, especially within extractive industries where firms face increasing expectations to demonstrate social accountability (Jackson et al., 2022). Well-designed CSR initiatives not only mitigate social and reputational risks but also foster shared value creation and long-term sustainability for both companies and communities (Rela et al., 2020). Yet, despite growing interest, the effectiveness of CSR interventions is often insufficiently assessed in quantifiable terms. Traditional evaluations rarely capture the multi-dimensional outcomes—economic, social, and environmental—arising from such initiatives. To address this gap, this study applies the Social Return on Investment (SROI) framework developed by Social Value UK to assess the holistic value generated by a community-based CSR program in Indonesia's extractive sector. The SROI methodology monetizes both tangible and intangible outcomes, providing a stakeholder-centered metric for social impact assessment (Banke-

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Thomas et al., 2015). Complementing this, the study employs the Theory of Change (ToC) framework and a self-developed Social Ripple Effect Model for Riverside Micro-Entrepreneurship (SREM-RM) to map the causal pathways from inputs to long-term outcomes.

This research contributes to the literature on CSR effectiveness by offering an empirically grounded, stakeholder-inclusive assessment of social value creation in the context of crisis recovery. It also provides policy and managerial insights for scaling inclusive CSR initiatives that enhance SME resilience and promote sustainable development in similar socio-economic environments. Specifically, the study aims to: 1) Quantify the social, economic, and environmental value created by a CSR initiative using the SROI framework; 2) Identify and analyze the key outcomes experienced by participating SMEs and stakeholders; and 3) Propose strategic recommendations to enhance CSR program effectiveness and scalability in post-pandemic contexts.

B. LITERATURE REVIEW

Corporate Social Responsibility (CSR) and SMEs

Corporate Social Responsibility (CSR) has evolved from philanthropy into a strategic approach embedded in business operations. Defined as a firm's commitment to sustainable economic and social development, CSR is especially critical in sectors with strong environmental and social footprints, such as extractive industries (Jackson et al., 2022). In developing economies like Indonesia, where institutional support for small enterprises remains limited, CSR often functions as an external driver for Micro, Small, and Medium Enterprise (MSME) empowerment. SMEs account for over 99% of Indonesian businesses and contribute more than 60% to GDP (Sugiri, 2020), yet continue to face constraints in capital, market access, and digital capabilities (Ņikadimovs, 2023). The COVID-19 pandemic magnified these challenges, underscoring the need for coordinated resilience strategies (Hardilawati, 2020).

Research highlights CSR's potential to enhance SME competitiveness and sustainability. Economic and philanthropic initiatives improve stakeholder satisfaction and performance (Rinawiyanti et al., 2021), while CSR integrated with green innovation fosters long-term competitiveness (Achi et al., 2022). CSR also stimulates creativity and stakeholder engagement (Jaén et al., 2021), leading to stronger brand equity and sustained advantage (Zhou et al., 2020). SMEs, however, tend to implement CSR informally—guided by local ethics and community expectations rather than formal frameworks (Kumar et al., 2020). This flexibility enhances local relevance but complicates impact measurement and scalability. Nonetheless, CSR initiatives targeting SMEs can yield systemic benefits by fostering resilience, employment, and inclusive growth. This aligns with (Porter and Kramer, 2011) concept of shared value, where social problem-solving enhances business competitiveness. In extractive-industry contexts, CSR serves as both a legitimacy mechanism and a catalyst for community transformation (Rela et al., 2020). When aligned with local entrepreneurship development, CSR shifts from risk mitigation to capacity building. Integrating CSR into SME development thus generates multi-dimensional value—economic, social, and environmental—essential for inclusive recovery in post-crisis contexts.

Theory of Change (ToC)

The Theory of Change (ToC) is a widely used framework for program planning, monitoring, and evaluation that articulates how and why a desired change is expected to occur within a specific context. It maps causal linkages from inputs and activities to outputs, outcomes, and long-term impacts while making explicit the assumptions and contextual factors underpinning each stage (Mayne, 2015). Unlike linear logic models, ToC emphasizes feedback loops, multiple pathways of influence, and stakeholder participation in validating causal relationships (Higdon, 2020). This makes it particularly suitable for assessing complex, community-based interventions—such as CSR programs that integrate economic, social, and environmental objectives. In development and social innovation research, ToC enhances transparency, accountability, and adaptive management by allowing practitioners to refine interventions based on real-world evidence (Drabble et al., 2021). It also enables evaluators to capture intangible outcomes—such as empowerment, behavioral change, and social cohesion—that are often overlooked in traditional evaluation frameworks.

In this study, the ToC framework structures the Social Return on Investment (SROI) analysis of a community-based CSR initiative implemented by an extractive-industry firm in Indonesia. Developed collaboratively with stakeholders, the ToC guided three key processes: (1) defining the scope of expected change, (2) identifying stakeholder-specific outcomes, and (3) informing the selection of financial proxies for quantifying social value. The model posits that investments in micro-enterprise infrastructure, hygiene capacity building, and

environmental management can generate higher income, improved public health, and long-term local economic resilience. Feedback effects—such as increased community pride and SME participation—are also integrated into the causal chain. The growing application of ToC in private-sector CSR evaluation reflects its capacity to enhance impact attribution, accountability, and legitimacy (Mayne, 2017; Rad & Rad, 2021). For companies in socially sensitive sectors, ToC provides a credible mechanism to link CSR efforts with measurable social outcomes and reputational value. Within this study, its integration into the SROI framework ensures that monetized impacts are grounded in a transparent, evidence-based causal logic.

Social Return on Investment (SROI)

The Social Return on Investment (SROI) framework is an established methodology for measuring and monetizing the broader social, economic, and environmental value created by programs or interventions. Developed and popularized by Social Value UK, SROI is particularly effective for assessing non-market outcomes that conventional financial analyses overlook (Banke-Thomas et al., 2015). Unlike traditional cost–benefit analysis, SROI incorporates multiple stakeholder perspectives and translates both tangible and intangible outcomes into monetary values, yielding a ratio that expresses total value generated per unit of investment. The framework follows six standardized stages: 1) establishing scope and identifying stakeholders; 2) mapping outcomes through a Theory of Change; 3) evidencing and valuing outcomes using financial proxies; 4) adjusting for counterfactuals such as deadweight, attribution, and drop-off; 5) calculating the SROI ratio; and 6) reporting and embedding results (Social Value UK, 2021). The resulting ratio communicates the extent of social value created and serves as a persuasive tool for funders, policymakers, and communities. Beyond its communicative function, SROI fosters evidence-based decision-making and continuous program improvement (Hyatt et al., 2022).

In this study, the SROI approach is applied to assess a community-based CSR initiative implemented by an extractive-industry firm in Indonesia that aimed to strengthen micro-enterprise resilience. The program included infrastructure provision, hygiene mentoring, waste management, and digital branding support for local entrepreneurs. The analysis captures both financial outcomes (e.g., income growth) and non-financial impacts (e.g., improved hygiene standards, stakeholder trust, environmental quality) within a unified valuation model. To ensure methodological rigor, the study utilized mixed data sources, including interviews, focus group discussions, surveys, and secondary data from economic indicators and CSR records. Financial proxies were derived from local market data and adjusted using the Bank of Indonesia's policy rate (2020–2023). Sensitivity analysis tested the robustness of assumptions and identified the most influential variables. While SROI has been widely used in public and social policy contexts, its application within private-sector CSR in extractive industries remains limited (Vo, 2023; Hyatt et al., 2022). This study contributes to bridging that gap by demonstrating how SROI, when integrated with a participatory Theory of Change (ToC), can produce a transparent, stakeholder-driven model of social value creation that captures both quantitative and qualitative impact dimensions.

Net Present Value (NPV) in Social Impact Evaluation

The Net Present Value (NPV) is a fundamental financial metric used to determine project viability by calculating the present value of future cash inflows and outflows, adjusted for the time value of money. A positive NPV indicates that an investment generates net value beyond its costs, thus representing a viable initiative. Within the Social Return on Investment (SROI) framework, NPV plays a crucial role in translating long-term social outcomes into present-day monetary terms, enabling a rigorous comparison between social benefits and financial inputs (Milis et al., 2009). In SROI analysis, "cash flows" are interpreted not only as direct revenues but also as monetized social outcomes, such as improved hygiene, increased micro-enterprise income, and enhanced environmental conditions. The discount rate accounts for the opportunity cost of capital and temporal preference, ensuring that future social value is appropriately weighted. In this study, the Bank of Indonesia 7-Day Reverse Repo Rate (BI7DRRR) was adopted as the benchmark discount rate for the 2020–2023 evaluation period. Applying NPV in social valuation enables decision-makers to: compare the magnitude of social benefits relative to investments over time, incorporate the duration and decay of outcomes through drop-off adjustments, and strengthen transparency in deriving the final SROI ratio.

The analysis estimated the investment NPV of the CSR initiative at IDR 4.52 billion and the social benefit NPV at IDR 5.56 billion, resulting in an SROI ratio of 1.23—indicating that each Rupiah invested generated IDR 1.23 in social value. This positive ratio confirms the intervention's cost-effectiveness and its potential social impact. Moreover, embedding NPV within the SROI model provides a replicable framework for aligning

corporate social programs with measurable economic outcomes. However, the validity of NPV-based social valuation depends heavily on the quality and transparency of financial proxies used to monetize non-market outcomes. Stakeholder validation and context-specific proxy selection remain essential to ensure that calculated values reflect genuine social returns rather than speculative estimations.

Stakeholder Theory and Inclusive Impact Assessment

Stakeholder theory, introduced by (Freeman, 1984), redefines the firm's purpose as creating value for all stakeholders—not solely shareholders—such as employees, customers, suppliers, communities, and the environment. The theory has become foundational in Corporate Social Responsibility (CSR) and social impact assessment, emphasizing that organizations operate within networks of interdependent relationships. Long-term legitimacy and success depend on understanding and balancing these diverse interests, especially in resource-intensive industries, where maintaining a social license to operate requires strong stakeholder trust (Jackson et al., 2022). In the context of social impact evaluation, stakeholder theory provides the conceptual foundation for inclusiveness and equity. It guides evaluators to: (1) identify beneficiaries and affected groups; (2) capture both financial and non-financial outcomes such as empowerment and social cohesion; (3) ensure fairness in value distribution; and (4) validate impact assumptions through participatory processes. These principles are deeply embedded in the Social Return on Investment (SROI) methodology, which mandates stakeholder involvement throughout key stages—from defining outcomes to selecting financial proxies and verifying assumptions (Social Value UK, 2021). Neglecting stakeholder perspectives risks undervaluing significant outcomes or missing unintended effects (Banke-Thomas et al., 2015).

In this study, a power–interest matrix was used to prioritize engagement with six principal groups: the implementing firm, micro-entrepreneurs as direct beneficiaries, their families, public health institutions, local government agencies, and surrounding communities. Each group contributed distinct insights that informed the Theory of Change (ToC) and the selection of social outcome indicators. This participatory approach enhanced valuation accuracy, strengthened local ownership, and increased transparency in the CSR evaluation process. Moreover, stakeholder engagement enabled the identification of intangible yet transformative outcomes—including self-confidence, hygiene awareness, and community pride—that often elude conventional financial measurement. Recognizing these qualitative dimensions is crucial for understanding how CSR interventions generate systemic, sustainable social change beyond economic returns.

The Triple Bottom Line (TBL) Perspective

The Triple Bottom Line (TBL) framework, introduced by Elkington (1997), redefines business success by extending performance evaluation beyond financial profit to include three dimensions of value creation: People (social well-being), Planet (environmental sustainability), and Profit (economic viability). This "three Ps" model provides a holistic foundation for assessing corporate accountability and has become integral to Corporate Social Responsibility (CSR) and sustainability reporting. TBL promotes a stakeholder-centered approach that emphasizes equitable value creation across social, environmental, and economic domains, challenging firms to balance profitability with social legitimacy. In the CSR context, TBL serves as a normative framework for evaluating whether interventions generate comprehensive and sustainable outcomes. It complements stakeholder theory by recognizing the interdependence among business, community, and ecological systems, while reinforcing the need for transparent reporting of tangible and intangible results (Elkington, 1997). The framework is particularly relevant to resource-intensive industries, where economic gains often coexist with environmental and social externalities requiring integrated management strategies.

The post-pandemic period has further highlighted the importance of the TBL perspective. The COVID-19 crisis exposed the fragility of small business ecosystems and the intricate links between economic recovery, public health, and environmental quality (OECD, 2020). CSR programs that focus narrowly on financial recovery risk, neglecting the broader sustainability agenda. Applying the TBL lens enables organizations to design interventions that support systemic resilience, encompassing livelihoods, health systems, and ecological restoration. In this study, the TBL framework informs the integration of social (people), environmental (planet), and economic (profit) dimensions within the Social Return on Investment (SROI) model. Embedding TBL into SROI ensures that valuation extends beyond financial gains to capture multi-dimensional impact, aligning CSR evaluation with contemporary sustainability standards such as Environmental, Social, and Governance (ESG) metrics. Despite its influence, TBL has faced criticism for its complexity and the risks of superficial implementation or "greenwashing" (Norman & MacDonald, 2004). To address these challenges, scholars advocate coupling TBL

with rigorous analytical tools—such as SROI, Theory of Change, and participatory stakeholder assessments—to ensure credible and evidence-based evaluation. Accordingly, the TBL framework provides the conceptual foundation for this study's holistic assessment of CSR's contribution to sustainable development.

C. METHODS

This study employs a mixed-methods research design anchored in the Social Return on Investment (SROI) framework developed by Social Value UK. The approach integrates quantitative and qualitative data to measure the multi-dimensional impact of a Corporate Social Responsibility (CSR) initiative and to monetize social, economic, and environmental outcomes. This design is particularly appropriate for CSR programs involving diverse stakeholder groups and complex, interrelated outcomes. The research covered the program period from 2020 to 2023. Primary data were collected through in-depth interviews, focus group discussions (FGDs), and structured surveys with key stakeholders, including program implementers, micro-entrepreneurs, their families, public health representatives, local government officials, and community members. These qualitative instruments were used to identify perceived outcomes, validate the Theory of Change (ToC), and capture stakeholder narratives, while the surveys provided quantifiable indicators such as income changes, hygiene practices, and business stability. Observational data were also collected to assess environmental and operational conditions at the project site. Secondary data were sourced from CSR documentation, government reports, and regional socio-economic statistics, providing a baseline for investment costs and contextual indicators. The Bank of Indonesia's 7-Day Reverse Repo Rate served as the benchmark discount rate for present value calculations across 2020–2023.

Following the SROI protocol, the evaluation proceeded through six stages: 1) defining scope and stakeholder mapping using a power–interest matrix; 2) developing a participatory ToC model to trace causal pathways from inputs to long-term impacts; 3) evidencing and monetizing outcomes using validated financial proxies derived from market data and government benchmarks; 4) adjusting for counterfactuals through deadweight, attribution, displacement, and drop-off; 5) calculating the SROI ratio by comparing the net present value (NPV) of benefits to total investment; and 6) reporting results and embedding learning. A sensitivity analysis tested the robustness of key assumptions (e.g., proxy values and discount rates). Qualitative data were analyzed using thematic coding, which identified recurring themes, unanticipated outcomes, and stakeholder perceptions. These insights were triangulated with quantitative findings to ensure validity and contextual accuracy. The integrated methodology thus provides a holistic and stakeholder-centered evaluation, combining empirical measurement with grounded social understanding to assess the effectiveness and value creation of the CSR intervention.

D. RESULTS AND DISCUSSIONS

Overview of the BASULI SMEs Program

In 2020, a community-based Corporate Social Responsibility (CSR) initiative was launched by a major extractive-industry firm in Indonesia to support riverside micro-enterprises that experienced severe disruption during the COVID-19 pandemic. The intervention was designed to address the vulnerability of informal street vendors—affected by reduced consumer mobility, safety concerns, and lack of formal business infrastructure—through an integrated recovery and revitalization model. The program aimed to enhance the resilience and competitiveness of local micro-entrepreneurs through four core strategies: 1) Provision of standardized and hygienic business booths; 2) Hygiene and food safety mentoring in collaboration with local health authorities; 3) Improved waste management systems and public cleanliness campaigns; and 4) Digital branding and promotion to increase visibility and market access.

Implemented from 2020 to 2023, the program demonstrated strong adoption and measurable growth among participating vendors. As shown in Table 1, the number of participating microenterprises increased more than fivefold—from 30 in 2020 to 160 in 2023—indicating strong community engagement and sustained interest in the initiative.

Table 1. Growth in the Number of Participating Micro-Enterprises (2020–2023)

Year	Number of Vendors
2020	30
2021	80
2022	115

Year	Number of Vendors
2023	160

Source: Research data, 2025

This growth reflects the initiative's perceived value and legitimacy, particularly in improving business hygiene, structural aesthetics, and government recognition through health certifications. Beyond the quantitative increase, the program helped transform an underutilized riverside area into a vibrant culinary and tourism hub, generating local employment and stimulating microeconomic activity. The initiative illustrates a strategic evolution of CSR—from short-term philanthropic giving to community-centered capacity building—by aligning corporate investment with public-sector priorities in local economic recovery and tourism development. The combination of infrastructure provision, behavioral change interventions, and institutional collaboration has positioned the program as a model for inclusive and sustainable urban revitalization in post-crisis contexts.

SROI Results and Key Metrics

The Social Return on Investment (SROI) analysis demonstrated that the community-based CSR initiative generated a positive social value, with a final SROI ratio of 1.23. This indicates that for every IDR 1 invested, approximately IDR 1.23 of combined social, economic, and environmental value was created. The analysis covered three years (2020–2023) and followed the standardized six-step SROI methodology of Social Value UK, incorporating Net Present Value (NPV) adjustments using the Bank of Indonesia's 7-Day Reverse Repo Rate. The total present value of quantified social benefits amounted to IDR 5.56 billion, compared to an investment value of IDR 4.52 billion in present terms. Table 2 summarizes the main SROI calculation results.

Table 2. Summary of SROI Calculation (2020–2023)

Description	Value (IDR)
Total Present Value of Benefits	5,566,407,782
Total Investment (NPV)	4,524,994,102
SROI Ratio	**1.23**

Source: Research data, 2025

The monetized outcomes contributing to this ratio included: 1) Increased micro-enterprise income from improved market access and business infrastructure; 2) Enhanced public hygiene resulting from mandatory mentoring and certification programs (30 certified vendors); 3) Environmental benefits through structured waste collection and cleanliness initiatives; and 4) Growth in social capital, reflected in higher community pride and stakeholder trust. The analysis revealed that most social value was concentrated in three key domains: (1) revenue growth among micro-entrepreneurs, (2) improved food safety and hygiene standards, and (3) the revitalization of the riverside area into a clean, organized, and tourism-oriented business hub. The structured SROI approach captured both tangible outcomes (e.g., income gains, infrastructure use) and intangible outcomes (e.g., behavioral change, social cohesion), providing a holistic view of program performance.

Although the SROI ratio of 1.23 signifies moderate social value generation, it remains above the break-even threshold (1.00), validating the initiative as a cost-effective and socially beneficial intervention. The analysis incorporated standard impact-adjustment factors—deadweight, attribution, displacement, and drop-off—to ensure robustness and transparency. All assumptions were grounded in stakeholder consultation and validated financial proxies, ensuring that the results provide a credible and replicable foundation for scaling similar CSR-based community development models in comparable socio-economic contexts.

Tangible vs Intangible Outcomes

The CSR-based micro-enterprise program generated a range of outcomes that can be broadly categorized into tangible (quantifiable and monetizable) and intangible (non-monetary but socially significant) impacts. This distinction is essential for a comprehensive understanding of social value creation within the Social Return on Investment (SROI) framework. While tangible outcomes form the empirical basis for the SROI ratio, intangible outcomes provide critical context for understanding behavioral and institutional change that sustains long-term impact. Tangible outcomes refer to results that can be directly measured or monetized, such as vendor income, infrastructure use, certification attainment, and environmental cost savings. Vendors reported higher revenue following relocation to standardized and hygienic stalls, citing improved customer trust and increased foot traffic as key drivers. Thirty participants also obtained official food hygiene certificates following mentoring conducted in partnership with local health authorities. Intangible outcomes, while not monetized in the current SROI model, emerged consistently from interviews and focus group discussions. These included enhanced vendor self-confidence, stronger community pride, improved vendor–customer relationships, and increased institutional

legitimacy for the implementing company. Such outcomes contribute to community cohesion and long-term sustainability, even if their financial proxies remain underdeveloped.

Table 3. Classification of Tangible and Intangible Outcomes

Outcome Category	Description	Type
Increased vendor income	Higher sales due to improved stall visibility and customer volume	Tangible
Hygiene certification	30 vendors trained and certified in food safety standards	Tangible
Tourist traffic growth	Visitor count reached 7,175 by 2023	Tangible
Waste management improvements	Introduction of bins and collection systems reduced local waste	Tangible
Vendor self-confidence	Improved marketing and communication skills	Intangible
Customer loyalty	Repeat patronage and stronger word-of-mouth promotion	Intangible
Community pride	The Riverside area is perceived as a local culinary landmark	Intangible
Corporate social image	Enhanced organizational reputation and stakeholder trust	Intangible

Source: Research data, 2025

The interaction between tangible and intangible outcomes highlights the multilayered nature of social value. Although only tangible results were incorporated into the SROI calculation, intangible benefits served as enabling factors—strengthening vendor motivation, customer loyalty, and collective identity. These qualitative dimensions amplify program effectiveness and often extend beyond the temporal scope of financial evaluation. Future SROI applications could further refine the valuation of intangible outcomes as validated proxies become available, enhancing the precision and depth of social impact measurement.

Stakeholder-Specific Impact Analysis

A defining feature of the Social Return on Investment (SROI) framework is its stakeholder-centered orientation, which posits that social value must be understood through the experiences of those directly and indirectly affected. In this study, six primary stakeholder groups were identified and actively engaged throughout the evaluation process. Each group derived distinct benefits from the CSR initiative, encompassing financial, social, environmental, and institutional outcomes. The micro-entrepreneurs were the principal beneficiaries. They reported higher and more stable income due to improved stall infrastructure, increased customer traffic, and enhanced hygiene standards. Qualitative interviews revealed a shift toward greater professionalism, stronger customer loyalty, and improved pricing capacity. For the families of micro-entrepreneurs, impacts were indirect yet meaningful—stable income improved household budgeting, food security, and spending on children's education.

The public health agency benefited through expanded outreach and more effective implementation of hygiene certification, achieving measurable improvements in food safety practices at minimal additional cost. The local government benefited from the formalization of previously informal vendors, which enhanced urban cleanliness, reduced public complaints, and supported local objectives for tourism and orderliness. For the local community, indirect gains included a cleaner environment, safer public spaces, and a sense of collective pride in the revitalized riverside area. Finally, the implementing firm derived reputational benefits and strengthened its social legitimacy through visible investment in community recovery and responsive engagement with local economic needs.

Table 4. Stakeholder Impacts from the CSR-Based Micro-Enterprise Program

Stakeholder Group	Key Outcomes
Micro-Entrepreneurs	Increased income, improved hygiene practices, customer trust, and business continuity
Vendor Families	Enhanced household stability, improved budgeting, and education spending
Public Health Agency	Expanded food safety outreach and vendor certification
Local Government	Vendor formalization, urban cleanliness, and tourism alignment
Local Community	Cleaner environment, safer public spaces, and local pride
Implementing Firm	Strengthened CSR visibility, reputation, and social legitimacy

Source: Research data, 2025

This multi-stakeholder analysis illustrates the ripple effect of inclusive CSR interventions, where direct and indirect benefits reinforce one another across different societal levels. The findings suggest that when stakeholders co-create and co-own outcomes, the resulting social value is both deeper and more sustainable. Such differentiated impacts strengthen the case for scaling and replication, as each stakeholder derives mutually reinforcing benefits that enhance the program's overall legitimacy and long-term viability.

Sensitivity Analysis

To assess the robustness and reliability of the Social Return on Investment (SROI) findings, a sensitivity analysis was conducted to test how variations in key assumptions and parameters influence the final SROI ratio.

This is a standard component of the SROI methodology, designed to enhance analytical credibility by identifying the variables with the greatest impact on the calculated social value (Social Value UK, 2021). The analysis examined five key factors: 1) Deadweight – the proportion of outcomes likely to occur without the intervention; 2) Attribution – the extent to which outcomes are attributable to the CSR initiative rather than external actors; 3) Financial proxies – monetary estimates assigned to social outcomes such as increased income or improved hygiene; 4) Discount rate – based on the Bank of Indonesia's 7-Day Reverse Repo Rate (3.5%–5.25%) for 2020–2023; and 5) Drop-off rate – the annual decline in outcome value, initially set at 20%. Each parameter was adjusted within empirically plausible ranges, informed by stakeholder input and local data. Results indicated that the SROI ratio was most sensitive to changes in financial proxies and attribution rates. For example, a 25% reduction in the income proxy lowered the SROI ratio from 1.23 to 1.08, while increasing the attribution rate from 30% to 50% reduced it below break-even (0.97).

Table 5. Sensitivity of SROI Ratio to Key Variables

Variable Modified	Original Assumption	Adjusted Scenario	Resulting SROI Ratio
Vendor income proxy ↓ 25%	IDR 2.5M/month	IDR 1.875M/month	1.08
Attribution rate ↑ to 50%	30%	50%	0.97
Deadweight ↑ to 40%	20%	40%	1.05
Discount rate ↑ to 7%	5% (avg)	7%	1.18
Drop-off ↑ to 30%/year	20%	30%	1.12

Source: Research data, 2025

These results underscore the importance of stakeholder-informed proxy validation and cautious attribution assumptions. In community-based CSR programs where multiple actors contribute to impact, overestimating attribution to a single initiative can inflate social returns, while excessive conservatism may obscure genuine value. Although the base-case SROI ratio of 1.23 demonstrates positive social value creation, its proximity to the break-even point highlights the need for continuous data refinement and program optimization. Future implementations could enhance reliability through improved tracking of income, visitor traffic, and health outcomes, supported by digital monitoring tools or periodic impact audits. Such measures would strengthen future SROI models, ensuring more precise valuation and accountability in community-based CSR impact assessments.

Discussion

The findings confirm the strategic potential of Corporate Social Responsibility (CSR) interventions in strengthening informal micro-enterprise ecosystems, particularly in post-crisis recovery contexts. Evaluated through the Social Return on Investment (SROI) framework, the program demonstrates how multi-dimensional value can emerge from integrated, stakeholder-driven approaches. From a theoretical perspective, the results reinforce the Triple Bottom Line (TBL) framework (Elkington, 1997), showing that sustainable CSR outcomes require balanced attention to economic viability (profit), social well-being (people), and environmental stewardship (planet). By combining hygiene mentoring, structured waste management, and micro-enterprise infrastructure, the initiative operationalized TBL principles, aligning with (Norman and MacDonald, 2004) argument that sustainability depends on interlinked, cross-sectoral strategies rather than isolated actions.

The study also illustrates the practical application of Stakeholder Theory (Freeman, 1984), as diverse actors—including micro-entrepreneurs, families, local authorities, and public health agencies—were meaningfully involved in program design and evaluation. This participatory approach ensured that outcomes reflected lived experiences and enhanced legitimacy, consistent with literature emphasizing inclusive stakeholder engagement in CSR evaluation (Banke-Thomas et al., 2015). The SROI ratio of 1.23 indicates a positive but moderate level of social value creation. Compared with similar community-based initiatives, SROI ratios in these initiatives often range from 1.5 to 3.0 (Hyatt et al., 2022). This modest return likely reflects limited digital integration and financial inclusion components—factors that have been shown to significantly improve productivity and market reach among microenterprises (Vo, 2023). Future program iterations could therefore enhance outcomes by incorporating digital marketing tools, e-payment systems, and access to microfinance to expand impact depth and scale.

Beyond financial measures, intangible outcomes such as confidence, customer loyalty, and social pride emerged as critical enablers of sustainable impact. These findings support emerging scholarship calling for the inclusion of subjective well-being and behavioral change within social valuation frameworks (Su, 2024). While such outcomes were not monetized in this analysis due to limited proxy data, their consistent appearance in qualitative evidence underscores their importance in long-term transformation processes. The sensitivity analysis further validated the model's robustness while highlighting the influence of attribution and proxy assumptions—

echoing Gusni et al. (2023), who advocate for adaptive and context-sensitive valuation systems. Lastly, the multi-stakeholder impact pattern observed—spanning entrepreneurs, families, institutions, and communities—demonstrates a ripple effect characteristic of systemic CSR interventions. This underscores that scaling CSR should not focus solely on budget expansion but on cross-sectoral design that maximizes shared and cumulative value across stakeholder networks.

Strategic and Policy Implications

The findings of this study offer strategic and policy insights into the evolving role of Corporate Social Responsibility (CSR) in strengthening local economic resilience and community recovery in post-crisis contexts. With an SROI ratio of 1.23, the evaluated initiative demonstrates that even moderate CSR investments can yield positive, multi-dimensional returns when grounded in community needs, institutional collaboration, and integrated impact pathways. Strategically, the program presents a replicable model for private-sector actors seeking to align CSR agendas with inclusive and sustainable development goals. By combining physical infrastructure support, behavioral change interventions, and institutional coordination, the initiative represents a shift from philanthropic CSR toward a development-oriented model that empowers informal micro-enterprises as drivers of local economic revitalization. The analysis identified several success factors relevant for future CSR programming: 1) Stakeholder alignment – collaborative governance among private, public, and community actors fostered trust and resource efficiency; 2) Integrated intervention design – coupling infrastructure provision with hygiene mentoring and branding support created synergistic impacts; 3) Multi-dimensional value creation – tangible income gains were complemented by intangible outcomes such as confidence, social pride, and institutional trust.

Despite its positive results, the modest SROI ratio highlights areas for optimization. Key improvement opportunities include integrating digital infrastructure (e.g., online marketing, QR-based payments) and expanding access to microfinance, which could enhance financial inclusion and scalability of similar interventions. From a policy perspective, the findings suggest that local governments and private actors should adopt hybrid urban development models that link support for the informal sector with tourism, health, and environmental agendas. Simplifying regulations—such as permitting processes or hygiene compliance incentives—could further enable micro-enterprise formalization. Institutionally, embedding monitoring and evaluation (M&E) frameworks like SROI or Theory of Change (ToC) at the program design stage would facilitate real-time learning, adaptive management, and transparent impact reporting. As ESG (Environmental, Social, and Governance) standards become integral to corporate accountability, firms that apply evidence-based CSR assessments will be better positioned to demonstrate measurable, credible social value. Finally, the study underscores the scalability potential of community-based CSR models. Lessons from this initiative could inform interventions targeting other vulnerable sectors—such as coastal livelihoods, agricultural microenterprises, or women-led informal businesses—thereby advancing a more inclusive, data-driven, and sustainable CSR paradigm in developing economies.

E. CONCLUSION

This study evaluated a community-based Corporate Social Responsibility (CSR) initiative designed to revitalize informal micro-enterprises in the aftermath of the COVID-19 pandemic. Applying the Social Return on Investment (SROI) framework, the analysis revealed a positive return of 1.23, indicating that each Indonesian Rupiah invested generated approximately IDR 1.23 in combined social, economic, and environmental value. The program produced significant tangible outcomes—including increased vendor income, improved hygiene certification, and enhanced public infrastructure—while also generating intangible benefits such as self-confidence, community pride, and institutional collaboration. These outcomes demonstrate strong alignment with the Triple Bottom Line (TBL) and Stakeholder Theory, confirming the potential of integrated CSR models to drive inclusive and sustainable local development. The analysis identified several variables influencing SROI performance, including financial proxy selection, attribution rates, and the quality of stakeholder engagement. The sensitivity of results to these factors underscores the need for robust monitoring systems, participatory program design, and transparent valuation processes to ensure credible and accountable social impact measurement.

Strategically, the program's modular, collaborative design enhances its scalability and adaptability across diverse socio-economic contexts. However, the moderate SROI ratio suggests that greater impact could be

achieved through digitalization and financial inclusion, such as mobile payment systems, digital marketing platforms, and microfinance access for micro-entrepreneurs. Embedding these components could amplify both the depth and reach of future CSR initiatives. From a policy perspective, the findings suggest that hybrid models linking informal-sector empowerment to urban development, public health, and environmental management can generate synergistic, cross-sectoral benefits. Institutionalizing frameworks such as SROI and Theory of Change (ToC) within CSR planning would further enhance transparency, adaptive management, and alignment with Environmental, Social, and Governance (ESG) standards. Overall, this study provides empirical evidence supporting CSR as a strategic mechanism for post-crisis economic recovery and offers a replicable model for sustainable, stakeholder-centered development in emerging economies.

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