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Evaluating the Social and Economic Impact of Batik Industry Development in West Java: An SROI Approach

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Abstract

Indonesia's batik industry has seen fluctuating export trends, peaking at USD 744.79 million in 2022 before declining by 13.51% in 2023. To support batik artisans, Deposit Insurance Corporation is called Lembaga Penjamin Simpanan (LPS) in Indonesia and Batik Fractal launched a corporate social responsibility (CSR) initiative-an end-toend business training program in Sukabumi and Cianjur, West Java. This study evaluates its impact using the Social Return on Investment (SROI) framework, which measures social, economic, and environmental benefits. The program improved artisans' digital literacy with jBatik applications, enhanced design creativity, strengthened financial management, and optimized pricing strategies and social media use. The SROI ratio of 17.039 indicates that every Rp 1 invested generates Rp 17,039 in social impact, demonstrating the program's efficiency. These findings emphasize the need for structured training, certification, and mentorship to preserve traditional batik techniques while fostering innovation. Market expansion through digital platforms, branding, and export assistance, along with financial support, can enhance industry sustainability. Furthermore, adopting technology, such as blockchain for authenticity verification and ecofriendly innovations, can modernize the sector. This study highlights the effectiveness of targeted interventions in strengthening economic resilience and safeguarding Indonesia's cultural heritage.

Keywords: Batik Industry, Cultural Heritage Preservation, Digital Transformation, Social Return on Investment (SROI) **Article History:**

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INTRODUCTION

Indonesia's batik, on October 2, 2009, was designated as one of the Masterpieces of the Oral and the Intangible Heritage of Humanity by UNESCO. Batik was once thought of by Indonesians as formal clothing appropriate for a variety of settings, but in the modern era, it has evolved into a fashion accessory that every Indonesian needs (Kusumawardani et al., 2021). As batik's significance in Indonesian culture evolves, preferences for its quality, pattern, color, and design continue to diversify. The batik industry is growing quickly right now and

has a lot of room to grow in the future (Ihsan, 2023; Rahmawati et al., 2018). Despite the apparent advancement of Indonesian batik SMEs, they encounter several hurdles in company development. Furthermore, market and technological dynamics are continually intensifying. Indonesian batik SMEs must identify their challenges and adopt open innovation strategies to improve their performance and competitive advantage (Raya et al., 2021a). According to Kementerian Perdagangan Republik Indonesia (2023), as seen in Figure 1, the batik exports from 2020 until 2022 kept growing, with the peak of the export value in 2022 at USD 744,79 million. However, in 2023, batik exports declined as much as 13,51%; this condition was similar to the batik imports during the same period. It is believed that global or geopolitical factors are to blame for the decline in exports. Thus, in this kind of situation, the batik producers and artisans should find another strategy to compete in the market.

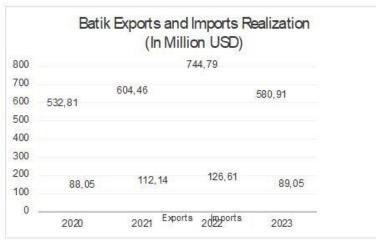


Figure 1. Batik Exports and Imports Realization Source: Kementerian Perdagangan Republik Indonesia (2023)

Lembaga Penjamin Simpanan Indonesia (LPS), in collaboration with Batik Fractal, held a corporate social responsibility (CSR) through an end-to-end business training program for Batik artisans in Sukabumi and Cianjur, West Java. Batik, a traditional Indonesian textile printing method and design style, was once primarily regarded as formal attire for various occasions. However, it has since evolved into a fashionable item that is widely embraced by Indonesians (Rahmawati et al., 2018). Moreover, each region in Indonesia has its pattern according to their way of life. Thus, one of the goals of the training itself is to develop the characterized pattern from Sukabumi and Cianjur and endorse their local batik business owner and artisans. Moreover, based on a study conducted by Raya et al. (2021b) among developing countries, Indonesia has one of the highest SME turnover rates. With approximately 64,194,000 SMEs in 2018, these enterprises play a crucial role in driving Indonesia's economic development.

The Sukabumi Regency and City and Cianjur City areas in West Java have a long tradition in batik production. The people there have carefully preserved the batik heritage. Despite its great potential, the traditional batik industry in this area may not have fully utilized digital technology to increase its competitiveness. Through this program, local batik entrepreneurs in Sukabumi, Cianjur, and the surrounding areas can get the mentoring and training they need to utilize digital technology in their businesses. While Batik Fractal emphasizes the integration of technology in the creation of batik motif designs. Initially, batik motifs are converted into fractal mathematical formulas utilizing the L-system language. Subsequently, these formulas are refined by adjusting parameters to yield more intricate designs. The jBatik software processes these formulas, generating images of batik motifs distinct from the originals. This application facilitates artisans in designing batik motifs, allowing users to simply drag and drop motifs into the layout. The application necessitates precision and creativity to produce high-quality batik motif designs. In addition to motif creation, it also enables the application of colors to the designs (Nurjanah et al., 2020). Thus, it can be very beneficial for the batik artisan in Sukabumi and Cianjur to adopt the technology invented by Batik Fractal in order to advance their production and operational process.

There is increasing recognition that improved approaches for quantifying the social, economic, and environmental value produced by human activities are necessary. The nomenclature evolves—'impact,' 'returns,' 'benefit,' 'value'—yet the inquiries regarding the nature and extent of the difference we are affecting persist unchanged. Comprehending and overseeing this extensive value is increasingly essential for both public and private sectors (Aurashafa & Premananto, 2024). This holds true for non-profit organizations aiming to generate value, governments funding initiatives to foster social value. Investors striving to ensure their investments yield a positive impact, or private enterprises acknowledging both the risks and opportunities associated with the wider implications of their operations (Nicholls et al., 2012). Corporations that actively pursue Corporate Social Responsibility aim to assess all facets of their operations, including welfare. However, conducting an unbiased

and comprehensive assessment is challenging, as well-being is a multidimensional concept that includes both tangible and intangible elements that evolve over time (Prabawani et al., 2023). The monetary assessment requires the utilization of proxies, hence prompting concerns regarding evaluation precision. There is increasing recognition of the need for a management tool to evaluate the welfare benefits of CSR initiatives and guide enterprises toward socially responsible investments. In response, various organizations and academic institutions have developed diverse social impact assessment methodologies, which corporations and the public sector now use to measure social value (Lombardo et al., 2019).

Thus, to measure the program conducted by LPS and Batik Fractal Social Return on Investment (SROI) is utilized. SROI uses a wide range of metrics that address the effects on society, the economy, and the environment. SROI takes a societal perspective, assessing outcomes that are relevant and significant to stakeholders, and assigns monetary values to these outcomes, even when they lack market pricing. This study identifies key outcomes such as enhanced production, management, and marketing capabilities between clients. Employing comprehensive business management skill valuation, the social worth of pertinent results was subsequently juxtaposed with the overall costs to calculate an SROI ratio (Corvo et al., 2022; Makanjuola et al., 2022).

LITERATURE REVIEW

Batik

The term batik appears to have arisen from the Javanese words "amba" or "titik". The suffix "tik" in each word signifies "creating small dots." The batik industry in Malaysia and Indonesia is currently dominated by two production techniques: hand-drawn batik or "batik tjanting" and batik stamp or "batik terap/blok". The inception of batik in Indonesia possesses a distinctive history that extends over 700 years, originating from the reign of Prince Wijaya of the Majapahit Kingdom between 1294 and 1309. Scholars hypothesized that hand-drawn batik was originally designated for Javanese nobility (Syed Shaharuddin et al., 2021). On October 2, 2009, batik was designated by UNESCO as a world heritage site, so establishing it as a key element of human oral and intangible history. A multitude of Indonesians selected batik as their daily attire. The need for alternative batik goods has risen throughout the fashion sector. Currently, batik manufacturers provide a diverse array of batik products, encompassing accessories, bags, and wallets. Numerous preferences exist regarding the quality, pattern, color, and design of Indonesian batik (Rahmawati & Rahadi, 2020).

Craft SMEs encounter difficulties in enhancing their human resources and market focus. They must prioritize the enhancement of personnel abilities, offer training or internships, establish supplier connections, and formulate an effective sales and marketing plan. Shifting consumer behavior and insufficient contemporary product design abilities are also big obstacles. Facilitating training and augmenting design competencies is essential for SMEs to compete with larger enterprises (Raya et al., 2021b). Marketing issues are escalating due to technical improvements and customer inclination towards digital media. Small and medium-sized enterprises encounter challenges with efficient advertising, online marketplaces, and promotions, which impede product creation and operational efficiency. Auxiliary sectors, such as tourism, may not effectively facilitate the development of SMEs. The collaboration between SMEs and ancillary industries can foster regional economic development.

Social Return on Investment (SROI)

The SROI methodology was originally created by the Robert's Enterprise Development Fund (REDF) in 1996 to assess capital grant applications from organizations under the REDF's philanthropic portfolio. The rationale for REDF's commitment to evaluating the impact of their resources was to ascertain the actual improvement in individuals' lives while simultaneously expanding the conventional notion of financial return by incorporating the beneficiaries of that return and all factors contributing to its generation (Corvo et al., 2022; Laing & Moules, 2017). SROI is a growing methodology that employs a participatory framework to assess the social and environmental returns of initiatives for beneficiaries and other stakeholders. The SROI can also enhance managerial procedures, enabling organizations to operate more efficiently and effectively in realizing their social impact. Any organization can utilize it to assess stakeholder impact, reconsider governance and management, and explore avenues for performance enhancement (Bellucci et al., 2019).

The fundamental methodology of SROI is predicated on the logic model or impact map activity that numerous non-profit and social sector organizations engage in during their strategic planning and organizational development processes (Bosch-Badia et al., 2020). The SROI technique has numerous advantages. Initially, an SROI measure enables a firm to demonstrate the extensive social value generated by its services or operations through economic terminology. Secondly, the SROI can facilitate non-profit management and decision-making, directing resources to the most effective projects. Thirdly, computing the SROI metric for organizations within a certain sub-sector, such as education or job training, facilitates benchmarking among analogous initiatives and establishes a foundation for comparative analysis. Ultimately, the capacity to evaluate social value creation across diverse interventions by standardizing social value into a common metric. This could enhance the efficiency of philanthropic capital distribution, thereby increasing the likelihood that high-performing organizations secure the necessary funding to amplify their social impact (Cooney & Lynch-Cerullo, 2014).

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METHOD

SROI is a methodology employed to assess the business returns generated from social initiatives undertaken by companies. SROI is designed to quantify impact values relative to the cost of the investment program (Kim & Ji, 2020). The SROI approach assesses whether the benefits of a program are equitably distributed among its primary targets or concentrated among specific parties, including those not intended as beneficiaries. There are seven principles of SROI that must be adhered to. They are as follows: (1) Involve the stakeholders, (2) Understand the changes, (3) Identify the vital values (4) only include the concrete materials (5) avoid over claim (6) must be transparent, and (7) verify the results (Asmita et al., 2020; Suryani et al., 2023).

The traditional batik ecosystem development and mentoring program through digital transformation in Sukabumi Regency and City and Cianjur City, West Java, in 2023, is an initiative held through Corporate Social Responsibility (CSR) by the LPS in collaboration with Batik Fractal. This program aims to provide strong support and stimulus to the development and maintenance of the traditional batik industry in the Sukabumi Regency and City and Cianjur City, which are located in West Java. This program is in line with LPS's vision to support the preservation of Indonesian culture and traditions. Batik, as one of the valuable elements of our cultural heritages, plays an important role in Indonesia's identity. LPS recognizes that local economic empowerment efforts are one effective way to improve people's welfare. By strengthening the batik industry, this program has the potential to create local jobs and support economic growth (Amperawati et al., 2023). Collaboration with Batik Fractal as a company that has competence in developing digital technology for batik allows for the exchange of valuable knowledge and experience in achieving common goals. The "jBatik" is a software created by Batik Fractal to help batik artisans design batik motifs using the fractal method. Fractal itself is a mathematical science related to repetition. The "jBatik" uses algorithms to realize ideas in the designer's head into ready-to-wear patterns. This tool makes it easier to design batik to be more innovative, more varied, and well-documented.

SROI analysis generates a benefit-to-cost ratio, enabling enterprises to convey the added value of their projects to external stakeholders. An SROI ratio of 1:1 indicates that each \$1 invested yields an equivalent \$1 in benefits, while a 2:1 ratio signifies two dollars of value generated per dollar invested. In addition to these ratios, SROI analysis constructs both qualitative and quantitative transformation narratives to capture the impact on key project stakeholders. This study follows the following SROI steps:

Define Scope and Identify Stakeholders

The several stakeholders are involved in this program can be shown in Table 1.

Table	Table 1. Stakeholders					
No	Stakeholders	Role	Data Collection			
1.	Batik and craft artisan: a. Sukabumi City b. Sukabumi Regency c. Cianjur City	There are 30 business entities registered as participants in this program. The participants consist of batik artisans, crafts, tailors, fashion designers, who are the owners and employees who work in the business entities particularly in Sukabumi and Cianjur.	Questionnaire and interview			
2.	Local Government: a.Sukabumi City b.Sukabumi Regency c.Cianjur City	The local government through supporting sub- units, namely Sukabumi Creative Hub and the local Cooperatives, SMEs, Trade and Industry Office, acts as a liaison and advisor between the program organizers and the artisans who are also	Interview			
3.	Batik Fractal	training participants. The main executor in training the batik and craft artisans. Including "jBatik" training, business management, and digital marketing advancement classes.	Interview			
4.	LPS	LPS acts as the initiator and donor for this program.	Interview			

Mapping the Results

Prior data collection, the project objectives were reformulated into a theory of change map to guide the development of the data collection instrument. After data collection, the map was revised and refined to reflect the experiences of project stakeholders rather than the initial objectives.

Evidence of the Results and Gives Value

Data collection was carried out using qualitative and quantitative methods as follows. Key informant interviews were conducted with individuals in influential community positions, including representatives from

the local governments of Sukabumi City and Cianjur City. There are interviews aimed to gain a deeper understanding of the observed changes, the involvement of various stakeholders – such as training participants – and the diverse perspectives they may hold. In addition, quantitative data from participant questionnaires taken before and after the training to see the changes in skills that were felt by participants.

Building Impact

After identifying and mapping each material outcome to the revised theory of change, the value of each outcome is assigned to the respective stakeholder groups, forming the basis for the SROI impact calculation map (Malini et al., 2024; Weston, 2012).

- 1) Discounting factors applied in the calculation to mitigate the risk of over-claiming. These factors serve to adjust and constrain individual social return values, ensuring a more accurate and reliable assessment of social impact.
- 2) Deadweight estimates the portion of outcomes that would have occurred even in the absence of the project. This value is typically determined using data from a comparison group. Deadweight percentages generally range from 0 to 10 percent, reflecting the extent to which the observed changes can be attributed to factors other than the project itself.
- 3) Displacement evaluates the extent to which the project's activities may have shifted negative outcomes to areas outside the project's scope. This assessment helps determine whether the intervention unintentionally caused adverse effects elsewhere, rather than fully addressing the issue.
- 4) Attribution recognizes that the changes observed are not solely the result of the program's investments and activities. It accounts for the contributions of other stakeholders, external factor, and parallel initiatives that may have also influenced the outcomes.
- 5) Drop-off measured the projected annual risk of participants discontinuing the practice or losing their benefits is measured through the drop-off rate. This rate represents the annual percentage decline in the value of the outcome, acknowledging that while impacts may persist over time, they may gradually diminish or be influenced by external factors.
- 6) Duration refers to the length of the time the outcomes of the project are expected to persist. It indicates how long the benefits generated will continue to have an impact before diminishing or were influenced by other factors.
- 7) Discount rate is discounted future returns accounts for the principle that individuals typically prefer immediate benefits over the delayed ones due to risks and opportunity costs associated with deferred returns. This adjustment ensures that long-term social value is appropriately measured in present terms.

SROI Calculation

Once all material impacts have been mapped, their values are aggregated and divided by the total project input costs to calculate the SROI ratio. Given that this project focuses on community development, its benefits are expected to extend beyond the project's duration, generating long-term social value. Social returns are calculated for three time periods with the following key assumptions:

- 1) The project's immediate post-closure value represents the direct benefits experienced by stakeholders, including both tangible and intangible outcomes.
- 2) The estimated value three years after the project completion, assuming no additional inputs, serves as the "base case" for the report, reflecting the sustained impact over time. Stakeholder involvement at every stage of assessing and valuing social enterprises is a key element of SROI. As a framework for measuring and evaluating the value created by social enterprises, SROI offers insights into the broader impact of social services. Consequently, it is increasingly recognized as a vital tool for informing and managing financing decisions. The SROI calculates the net societal benefits by deducting program expenditures, resulting in a ratio of monetized social value (Refki et al., 2020).

$$SROI = \frac{Net \text{ present value of benefit}}{Net \text{ present value of investment}}$$

RESULT

Outcome and Indicators

The following are the outcomes provided by participants after the training, then from their inputs converted into rupiah based on the turnover they might receive if they did not attend the training and continued to produce. Meanwhile, the general change indicators are based on data obtained from participants through questionnaires and interviews. These changes are measured through the value or level of ability obtained from each training program. The 30 participants consisted of different roles in one business entity. Commonly, the have "pembatik" (batik maker), "penjahit" (tailor), "perajin" (craftsman) souvenir, and designer (see Table 2).

Stakeholders Category	Baseline (Before training)	Outcomes and Indicators
"Pembatik"	Manual creation of patterns and	The use of the "jBatik" application in
(batik maker)	product designs, limited patterns,	making designs,
	ideas, simple calculation of selling prices, limited marketing media (word of mouth and some social media).	Increased creativity in patterns, neater financial records, and more diverse social media activation.
"Penjahit"	Manual creation of product designs,	The use of computer applications and
(tailor)	limited ideas, simple financial records, limited marketing media (word of mouth and some social media), limited visual content.	"jBatik" in making designs, increased creativity in creating patterns, neater financial records, more measurable calculation of prices and profits, improvement in skills in creating visual content and more diverse social media activation.
"Perajin"	Manual product design, limited ideas,	The use of computer applications and
(craftsman) Souvenir	simple selling price calculations, more measurable profits, limited marketing media (word of mouth and some social media), and business to business offers.	"jBatik" in making designs, increased creativity in creating patterns, neater financial records, more measurable calculation of prices and profits, improvement in skills in creating visual content and more diverse social media activation.
Fashion designer	The creation of patterns and product designs, uses general design applications, limited patterns, ideas, simple selling price calculations, and limited marketing media.	The use of the "jBatik" application in making designs, Increased creativity in the creation of patterns, as well as more diverse social media activation.

Table 2. Outcomes and Indicators

Financial Proxy

In the context of SROI, a financial proxy is a technique for estimating the monetary value of social, environmental, or economic impacts that are challenging or costly to measure directly. These proxies enable the quantification of impacts in monetary terms, facilitating a more comprehensive assessment of social value. In contrast, other, more easily measurable indicators or variables are used to represent the value of those impacts in financial terms. The financial proxies used in SROI calculations can be seen in Table 3.

No	Types of Training	Source Financial Proxies	Value of Financial
INU	Types of Training	Source Financial Floxies	Proxies (RP)
1.	"jBatik" Training	"jBatik"	4.000.000
2.	Marketing and Entrepreneurial	RevoU Digital Marketing Training	13.000.000
	Skills Training		
3.	Bookkeeping and Finance Training	IAI Jakarta	4.000.000
4.	Tailor Technical Skill Training	Juliana Jaya Advanced Sewing Training	7.500.000
5.	Technical Skill Training for	Craft Training	5.000.000
	Souvenir Craftsmen		
6.	Growth of the creative economy	West Java Creative Economy Growth is	8.558.518.519
	and Sukabumi cultural index	divided by the number of West Java	
		Cities and Regencies	
7.	Growth of the creative economy	West Java Creative Economy Growth is	8.558.518.519
	and Cianjur cultural index	divided by the number of West Java	
	-	Cities and Regencies	
7.		West Java Creative Economy Growth is divided by the number of West Java	8.558.5

SROI Calculation

Measuring the social, economic, and environmental impact of a program or initiative has become a top priority in various sectors, from business to non-profit and government sectors. The goal of this measurement is to understand more deeply how a program affects society, the environment, and the economy and to ensure that the resources invested generate significant value (see Table 4).

Dead weight in SROI analysis measures the proportion of an outcome that would have happened even without the intervention of the program. In this case, the program recorded a 0% deadweight, indicating that the

observed outcomes would not have occurred without the program's existence. This means that the digital transformation and upskilling impacts delivered to batik artisans were solely the result of the intervention. Similarly, attribution assesses the extent to which other organizations or programs contributed to the outcomes. A 0% attribution signifies that no other external programs significantly influenced the results achieved, further affirming that the impact can be fully credited to this specific initiative. While beneficiaries may have been exposed to other general empowerment initiatives, none were focused on digital, end-to-end capacity building specific to batik artisans.

Displacement measures whether the program's impact replaces other positive outcomes that would have otherwise taken place. In this context, the displacement rate is 0%, which means the program did not crowd out or replace any other useful activities, instead, it filled a critical gap. There are very few, if any, initiatives with a similar focus on comprehensive, technology-based upskilling for batik artisans. Meanwhile, drop-off refers to the reduction in impact over time after the initial implementation. It helps determine whether the benefits of the program are sustained or diminish each year after completion. A drop-off percentage quantifies this decline, allowing for a more realistic and time-adjusted valuation of long-term outcomes. For instance, a drop-off might be observed if artisans' reliance on or application of digital skills declines in the years following program support.

Table 4. SROI Calculation Attributes	5
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Components	Percentage
Deadweight	0%
Displacement	0%
Attribution	0%
Drop-off	0%
Duration	1 year
Discount Rate	5%

 $SROI = \frac{33,775,401,786}{1,982,150,500} = 17.039$

Through an in-depth analysis using the SROI calculation model, the financial proxy calculations for each training conducted reveal a substantial social return. Over a one-year period, the SROI value reaches 17.039, indicating that for every Rp 1 invested by LPS, a remarkable social impact of Rp 17,039 is generated. This signifies a highly efficient allocation of resources, demonstrating the program's ability to translate financial inputs into significant socio-economic benefits. Such a high SROI ratio underscores the transformative potential of the initiative, reinforcing its role in fostering sustainable development, economic empowerment, and long-term value creation within the batik industry and the broader community.

DISCUSSION

The Social Return on Investment (SROI) result of 17.039 demonstrates an exceptional return, meaning each Rp 1 invested by LPS yields Rp 17,039 in social impact. This high ratio underlines the significance and transformative effect of the intervention. To provide a deeper insight, this section explores the results using the Theory of Change (ToC) as an analytical lens, tracing the logical pathway from inputs to long-term impact. The Theory of Change framework posits that impactful social programs are underpinned by clearly defined inputs, activities, outputs, outcomes, and long-term impacts (Nicholls et al., 2012). In this program, the inputs include financial investments by LPS, technical expertise from Batik Fractal, and time commitments by artisans. These inputs led to activities such as "jBatik" software training, marketing and branding classes, and financial literacy workshops.

These activities generated tangible outputs: 30 artisans gained new skills in digital design, bookkeeping, and social media marketing. From these outputs, the immediate outcomes were observable: increased creativity, better product pricing, enhanced digital literacy, and professional use of social media platforms. These results were corroborated through pre- and post-training questionnaires and interviews, affirming not only skill acquisition but behavioral change. The intermediate outcomes—such as improved product quality, broader digital market access, and higher cultural identity awareness—begin to manifest as the artisans apply their new capabilities in real-world contexts. According to ToC logic, these leads toward the impact level: greater economic resilience, strengthened cultural heritage, and enhanced regional creative economy contributions in Sukabumi and Cianjur.

What distinguishes this program from others is its systemic integration of technological innovation in traditional industries. By introducing "jBatik", which uses fractal algorithms to generate complex batik patterns, the program not only preserved traditional skills but modernized the production process, contributing to both cultural sustainability and economic competitiveness. Furthermore, the use of financial proxies bridges the challenge of quantifying intangible benefits, such as improved self-confidence and innovation capacity. In

accordance with SROI principles, this valuation ensures that even non-market outcomes are recognized, aligning with the multidimensional nature of wellbeing (Nicholls et al., 2012).

Comparatively, earlier SROI studies in the batik sector, such as the Rumah Batik Berkah program in Jambi (Malini et al., 2024) and the SIBA Batik Kujur initiative (Santoso et al., 2020), reported SROI values of 2.47 and 5.39 respectively. These values, while positive, are significantly lower than the current case, which may suggest that the digital transformation component and end-to-end business mentoring are crucial leverage points in maximizing social value.

In the broader context, the program also aligns with Open Innovation Theory in SME development, which encourages collaborative engagement with external knowledge sources to drive innovation (Raya et al., 2021). By fostering artisan-digital partnerships and knowledge exchange, the program helps overcome internal capability constraints common in micro-enterprises. To enhance future sustainability, the program should evolve into a continuous learning ecosystem with follow-up mentorship, certification, market linkage support, and digital platform integration. From a ToC perspective, such additions would strengthen the feedback loops and prevent drop-offs, thus enhancing long-term impact durability. Ultimately, this intervention is not merely a training initiative but a catalyst for structural transformation in the batik industry—integrating cultural preservation with digital innovation, and driving inclusive growth through targeted, evidence-based investment.

CONCLUSION

The Social Return on Investment (SROI) analysis of the CSR program initiated by LPS in collaboration with Batik Fractal demonstrates that strategic, end-to-end interventions can generate exceptional socio-economic outcomes in traditional industries. With an SROI ratio of 17,039, the program has proven to be not only efficient in financial terms but also transformative in social value creation. Hence, enhancing the capabilities of 30 batik artisans in Sukabumi and Cianjur through digital tools as "jBatik", marketing training, and financial literacy, the program catalyzed improvements in productivity, innovation, and competitiveness. Viewed through the lens of Theory of Change, the program successfully transitioned from inputs–such as funding and expert knowledge–through clearly defined outputs and measurable outcomes, toward long term impacts like increased economic resilience and cultural preservation. The high SROI ratio validates the strategic integration of digital transformation in traditional sectors, and underscores the importance of structured training, ecosystem support and stakeholder engagement. This study reinforces the potential of culturally rooted, digitally enabled empowerment programs to generate sustainable development outcomes. To ensure the continuity and amplification of this impact, future programs should be integrated with long term mentorship, market access facilitation, and policy support, while continuously measuring intangible benefits.

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