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Transforming Waste into Blessings: Implementation of Eco-Efficiency Through Kawalu Embroidery Waste Upcycling from Halalan Toyyiban Perspective

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Abstract

The embroidery industry in Kawalu, Tasikmalaya, serves as a primary driver of the local economy; however, its production activities present serious environmental challenges due to the accumulation of fabric scraps that are not optimally managed, thereby triggering ecological waste accumulation. This linear production model contradicts the principle of halalan toyyiban, which strictly prohibits any actions causing environmental degradation (mudarat). This research aims to analyze the implementation of eco-efficiency through fabric waste upcycling strategies in the Kawalu embroidery center and evaluate its effectiveness from a halalan toyyiban perspective. A descriptive qualitative method with a case study approach was employed. Primary data were gathered through field observations and in-depth interviews with local embroidery entrepreneurs in Kawalu, which were subsequently analyzed using data reduction, data display, and conclusion-drawing techniques. The results indicate that implementing eco-efficiency via upcycling fabric scraps into valuable new creative products (such as industrial cleaning rags, accessories, and secondary fashion items) successfully reduces the volume of manufacturing waste and minimizes waste management operational costs. Furthermore, the findings confirm that this upcycling practice fulfills the indicators of the toyyib concept, wherein the production supply chain is not only compliant with sharia law (halal) but also generates communal welfare, minimizes adverse environmental impacts, and transforms waste into a blessed circular economic value.

Keywords: *Circular Economy, Eco-Efficiency, Embroidery Industry, Halalan Toyyiban, Waste Upcycling.*

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INTRODUCTION

Modern economic development is frequently caught in a dilemma between accelerating industrial growth and maintaining ecological sustainability. Theoretically, the Sustainable Development Goals (SDGs) specifically Goal 12 concerning responsible consumption and production mandate that economic activities must not compromise long-term ecosystem capacity (Fletcher & Grose, 2021; United Nations, 2015). However, small and medium scale manufacturing and handicraft sectors often ignore negative environmental externalities in pursuit of short-term profitability (Abdelmeguid et al., 2024; Niinimäki et al., 2020). This dialectic creates a gap between *das Sollen* (ideal environmental preservation) and *das Sein* (exploitative field practices), which accelerates local environmental degradation if left unaddressed (Hassini et al., 2021).

In Indonesia, one of the creative industry sectors driving local economies while facing direct ecological challenges is the embroidery industry center in Kawalu District, Tasikmalaya City. According to official data from the Department of Cooperatives, SMEs, Industry, and Trade of Tasikmalaya City, Kawalu houses over 1,200 Small and Medium Industry (SMI) units, absorbing thousands of workers and serving as a major contributor to regional gross domestic product (Department of Cooperatives, SMEs, Industry, and Trade of Tasikmalaya City, 2023; Kosasih & Budiman, 2020). Nevertheless, high production output directly correlates with substantial volumes of non-biodegradable solid waste produced daily, primarily textile scraps accumulating around production zones (Anugerah & Lestari, 2022; Ramdhani & Mulyani, 2021).

Field evidence reveals that fabric scrap management in the Kawalu embroidery center remains far from ideal environmental sustainability standards. The Environmental Performance Information Document of Tasikmalaya City confirms that specific waste from local textile and embroidery sectors constitutes a primary burden on the Ciangir Landfill, as most business owners rely on conventional methods such as open burning or dumping scraps into rivers (Environmental Agency of Tasikmalaya City, 2024; Indonesian Ministry of Environment and Forestry, 2022; Law No. 18 of 2008, 2008). Burning synthetic fabric scraps releases toxic emissions such as dioxins into the atmosphere, escalating environmental health risks for nearby communities (Curteza et al., 2021; Shirvanimoghaddam et al., 2020).

To bridge the conflict between Kawalu's industrial productivity and environmental degradation, eco-efficiency serves as a viable theoretical solution. Eco-efficiency integrates economic and ecological performance, prompting industries to produce high-value goods competitively while minimizing environmental impacts across product life cycles (DeSimone & Popoff, 1997; Halstenberg et al., 2021; Pauliuk et al., 2021). An operational manifestation of this concept in textiles is upcycling, which transforms fabric scraps directly into higher-value functional and aesthetic products without chemical breakdown, unlike conventional downcycling (Earley & Goldsworthy, 2021; Sung et al., 2021). Although upcycling potential in Kawalu is vast, its implementation remains sporadic due to a lack of structured collective adoption (Awasthi et al., 2023).

From a theological business ethics perspective, applying eco-efficiency through upcycling aligns with the Islamic principle of *halalan toyyiban*. Halal compliance in creative industries is often reduced to formal legal requirements, such as freedom from forbidden substances or valid contractual agreements (Beik & Arsenyi, 2021; Djakfar, 2021). However, the *toyyiban* (wholesomeness/goodness) dimension requires a broader scope, encompassing process purity, sustainability guarantees, and the absence of harm (*la darar wa la dirar*) to humanity and nature (Al-Qaradawi, 2007; Fauzi & Hidayat, 2023). According to Qur'an 7:56, which strictly forbids environmental destruction, an embroidery enterprise cannot fully claim *toyyib* status if its supply chain causes ecological damage via unmanaged waste (Chapra, 2000; Mangunjaya, 2019).

The dialectic between accumulating textile waste in Kawalu, ethical *halalan toyyiban* demands, and eco-efficiency solutions reveals a fundamental research gap. Existing literature on Kawalu embroidery focuses primarily on marketing strategies, cluster competitiveness, or digital technology adoption (Kosasih & Budiman, 2020; Rusyani et al., 2019). Conversely, studies integrating circular waste management with *Maqasid al-Shariah* specifically environmental protection (*hifdh al-biah*) within traditional embroidery SMIs remain rare (Fauzi & Hidayat, 2023; Mangunjaya et al., 2022). Consequently, artisans lack holistic guidance to transform production residue from an environmental cost center into a new economic profit center (Anugerah & Lestari, 2022; Ramdhani & Mulyani, 2021).

Based on these theoretical, empirical, and theological imperatives, this study analyzes the real-world implementation of eco-efficiency through fabric scrap upcycling in Kawalu. Beyond documenting technical and financial hurdles, this study formulates a waste management model aligned with *halalan toyyiban* values. Through an interdisciplinary framework, the Kawalu embroidery industry can shift toward a green economy model that yields material profit while preserving ecological integrity and spiritual blessings for the broader community (Beik & Arsenyi, 2021; Stahel, 2019; Sung, 2017).

LITERATURE REVIEW

The theoretical foundation of this study integrates three main domains: industrial ecology, eco-efficiency-based operations management, and Islamic business ethics (*halalan toyyiban*). Discussions on modern manufacturing sustainability assert that industrial entities cannot act in isolation by extracting resources without addressing waste externalities (Graedel & Allenby, 2010; Hassini et al., 2021). Through an interdisciplinary approach, this review maps how solid textile waste can be converted into circular economic opportunities that are materially efficient, ethically pure, and socially beneficial (*toyyib*) (Beik & Arsenyi, 2021; Stahel, 2019).

The concept of eco-efficiency was established by the World Business Council for Sustainable Development (WBCSD) as a primary strategy to decouple economic growth from environmental degradation (DeSimone & Popoff, 1997; Schmidheiny, 1992). Substantively, eco-efficiency guides businesses to optimize raw material, energy, and water consumption while minimizing waste intensity and pollution across production cycles (Halstenberg et al., 2021;

Pauliuk et al., 2021). This approach requires shifting paradigms from viewing waste as a cost center to recognizing it as a potential resource with residual value (Awasthi et al., 2023; Stahel, 2019).

In textile and apparel manufacturing, eco-efficiency faces complex challenges due to high synthetic material consumption and rapid pre-consumer solid waste generation. Previous research demonstrates that inefficient cutting layouts often result in 15% to 20% of raw materials turning into fabric scraps that end up in landfills (Curteza et al., 2021; Niinimäki et al., 2020). Therefore, adopting clean production practices through optimized layout patterns and circular waste management is a key metric for evaluating ecological efficiency in fashion and apparel industries (Anugerah & Lestari, 2022; Irawan & Juliati, 2021).

As an operational form of eco-efficiency, upcycling offers an advanced alternative beyond conventional recycling. Upcycling is defined as transforming waste materials into new products of higher quality, aesthetic value, and economic worth without chemical degradation (Earley & Goldsworthy, 2021; Sung, 2017). Through creative design, fabric scraps are elevated into high-value secondary fashion products targeting new market segments, rather than being downcycled into low-grade industrial fillers (Sung et al., 2021; Wilson, 2022).

Upcycling in creative industries yields dual benefits by conserving environments and providing financial incentives. Experimental studies in sustainable fashion confirm that reusing fabric scraps reduces industrial carbon footprints by decreasing reliance on virgin fiber production (Fletcher & Grose, 2021; Shirvanimoghaddam et al., 2020). Economically, upcycled products yield favorable profit margins because raw material costs approach zero, strengthening the financial resilience of small enterprise operations (Awasthi et al., 2023; Ramdhani & Mulyani, 2021).

The embroidery SMI ecosystem in Kawalu, Tasikmalaya, presents a representative case of a traditional industrial cluster reliant on knitted and woven fabric raw materials. Cluster studies identify that Kawalu's core strength lies in intergenerational craftsmanship and extensive distribution networks, whereas its primary vulnerability stems from a lack of self-sustained waste management technologies (Kosasih & Budiman, 2020; Rusyani et al., 2019). Consequently, dense and colorful embroidery waste accumulates in residential zones, underscoring the necessity of structured upcycling interventions (Department of Cooperatives, SMEs, Industry, and Trade of Tasikmalaya City, 2024; Environmental Agency of Tasikmalaya City, 2024).

From a theological-ethical perspective, the core analytical axis rests on re-conceptualizing *halalan toyyiban* within Islamic economics. Islamic business ethics asserts that commodity quality depends not only on material compliance (*halal bi dzatihi*), but also on the ethical propriety of acquisition and production processes (*toyyib bi kasbihi*) (Beik & Arsenyi, 2021; Djakfar, 2021). A product fails full *toyyib* criteria if its value creation compromises social welfare or causes environmental damage (Al-Qaradawi, 2007; Fauzi & Hidayat, 2023).

In Islamic eco-theology (*fiqh al-biah*), *toyyib* directly intersects with stewardship (*khalifah*) and moral responsibility (*amanah*) (Chapra, 2000; Mangunjaya, 2019). Islam views the universe as existing in a balanced state (*mizan*), making destructive resource exploitation an ecological injustice (Mangunjaya et al., 2022; Qutb, 2004). Managing production waste to avoid pollution is

thus a religious obligation (*wajib shar'iyyah*) for Muslim entrepreneurs to preserve ecological balance (Al-Qaradawi, 2001; Fauzi & Hidayat, 2023).

The synthesis of Western eco-efficiency and Islamic *halalan toyyiban* principles yields a holistic framework: sharia-compliant green industry. Both frameworks reject wastefulness (*tabzir*) and environmental harm (*mudarat*) (Al-Qaradawi, 2001; DeSimone & Popoff, 1997). Integrating these perspectives positions material efficiency metrics as technical tools to fulfill *Maqasid al-Shariah*, particularly safeguarding life (*hifdh al-nafs*) and protecting the environment (*hifdh al-biah*) (Beik & Arsenyi, 2021; Chapra, 2000; Fauzi & Hidayat, 2023).

In summary, current literature reveals a research gap regarding the operationalization of *halalan toyyiban* into technical upcycling indicators within local embroidery SMIs. A qualitative case study method is selected to investigate how Kawalu artisans respond to accumulating fabric waste (Creswell & Creswell, 2018; Yin, 2018). Guided by this framework, this study constructs a circular waste management model that is scientifically valid and morally grounded for Muslim creative enterprises (Beik & Arsenyi, 2021; Stahel, 2019; Sung, 2017).

METHOD

This study utilized a descriptive qualitative approach with an intrinsic case study design to examine field-level waste management practices. A qualitative design was chosen because the research problem extends beyond numerical waste metrics to encompass human behavior, ecological awareness, and underlying theological interpretations (Creswell & Creswell, 2018; Moleong, 2021; Yin, 2018). Through a case study framework, the researchers explored how the embroidery SMI ecosystem in Kawalu District, Tasikmalaya City interacts with fabric scrap waste and how upcycling is applied as a tactical intervention (Kosasih & Budiman, 2020; Miles et al., 2014).

The research site was deliberately selected in the embroidery center of Kawalu District, Tasikmalaya City, as it represents the largest embroidery cluster in West Java facing high ecological burdens from synthetic fabric scrap accumulation (Department of Cooperatives, SMEs, Industry, and Trade of Tasikmalaya City, 2023; Environmental Agency of Tasikmalaya City, 2024). Primary data sources were selected using purposive sampling to recruit informants with direct knowledge of the research topic (Creswell & Creswell, 2018; Moleong, 2021). Key informants included Kawalu embroidery business owners, upcycling artisans, representatives from the Environmental Agency (*DLH*) of Tasikmalaya City, and local Islamic scholars (*ulama*) who evaluated *toyyib* standardizations (Fauzi & Hidayat, 2023; Ramdhani & Mulyani, 2021).

Data collection was conducted simultaneously using in-depth interviews, passive participant observation, and documentation analysis (Creswell & Creswell, 2018; Yin, 2018). Semi-structured interviews explored internal motivations, financial constraints, and spiritual perspectives on environmental blessings among artisans. Structured observations documented waste accumulation points in production areas, sorting workflows, and disposal methods. Secondary documents, including official SMI statistics and upcycled product photographs, were

gathered to support empirical triangulation (Department of Cooperatives, SMEs, Industry, and Trade of Tasikmalaya City, 2024; Miles et al., 2014).

Data analysis followed the interactive model by Miles, Huberman, and Saldaña (2014), comprising three cyclical steps: data condensation, data display, and conclusion drawing/verification. During condensation, interview transcripts and field notes were filtered to eliminate non-essential details. The condensed data were displayed via narrative accounts and comparative matrices to evaluate empirical upcycling practices against Western eco-efficiency indicators and Islamic environmental jurisprudence (*fiqh al-biah*) (Al-Qaradawi, 2001; DeSimone & Popoff, 1997; Fauzi & Hidayat, 2023).

To establish data trustworthiness and credibility, source and technique triangulation were applied (Creswell & Creswell, 2018; Moleong, 2021; Yin, 2018). Source triangulation involved cross-checking statements across business owners, municipal reports, and normative views from local Islamic scholars. Technique triangulation verified verbal interview disclosures against physical observations of plant disposal sites, ensuring objective, reliable, and valid analytical outcomes (Miles et al., 2014).

RESULT AND DISCUSSION

Result

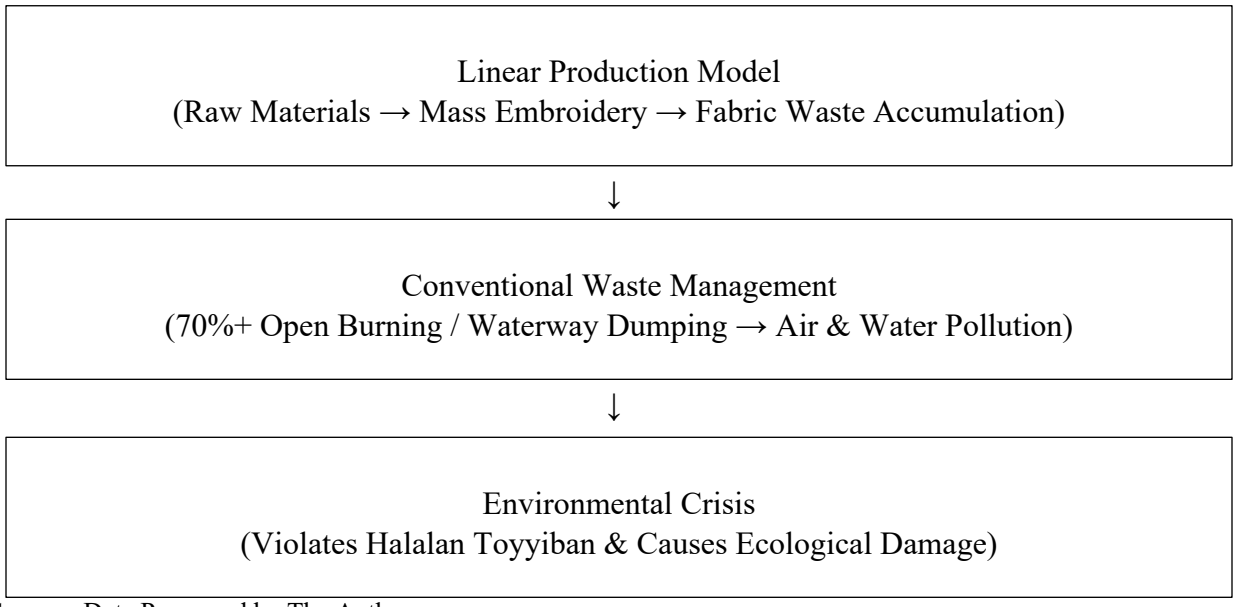
Empirical Reality and Fabric Scrap Waste Crisis in Kawalu

Field observations and in-depth interviews in the Kawalu embroidery center revealed that mass production generates substantial solid residues daily. Each embroidery SMI unit generates an average of 5 to 15 kilograms of fabric scraps per day, depending on operational computer embroidery machinery counts (Department of Cooperatives, SMEs, Industry, and Trade of Tasikmalaya City, 2024; Kosasih & Budiman, 2020). Accumulating waste consists primarily of small synthetic fabric cuttings including satin, chiffon, and cotton alongside colorful polyester thread ends. These empirical findings indicate that linear economic growth in Kawalu creates negative environmental externalities through waste accumulation in surrounding residential areas (Anugerah & Lestari, 2022; Ramdhani & Mulyani, 2021).

Over 70% of micro and small artisans dispose of waste by burning scraps in open yards, dumping them on vacant lots, or discarding them into waterways (Environmental Agency of Tasikmalaya City, 2024; Indonesian Ministry of Environment and Forestry, 2022). Open burning of petroleum-based synthetic fabrics releases hazardous emissions such as dioxins and furans into the air, causing odor pollution and respiratory issues for local residents (Curteza et al., 2021; Shirvanimoghaddam et al., 2020). These practices reflect an operational imbalance where business owners focus on maximizing short-term profits without managing pre-consumer solid waste responsibly (Awasthi et al., 2023; Niinimäki et al., 2020).

Field observations in the Kawalu embroidery cluster indicate that waste management still follows a linear model. As presented in Figure 1, fabric scraps from the embroidery production process accumulate and are managed conventionally through open burning and dumping into

Halalan Toyyibanpractice, where more than 70% of waste is burned, causes air and water pollution and triggers an environmental crisis that contradicts the principle of HalaHalalan Toyyiban.



Source : Data Processed by The Authors

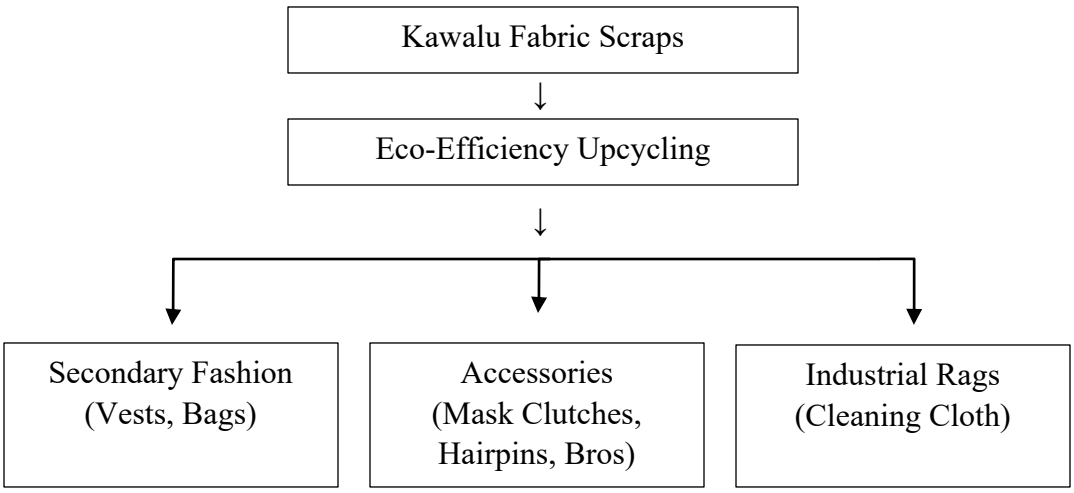
Figure 1. Linear Production Model and Conventional Waste Management Practices Leading to Environmental Crisis in the Kawalu Embroidery Industry

Upcycling Typologies and Operational Waste Management

Despite the prevalence of linear practices, field data identify three functional product categories resulting from community-based upcycling initiatives in Kawalu :

1. Secondary Fashion Items: Longer fabric strips are joined using patchwork techniques to produce vests, shopping bags, and ethnic tote bags (Earley & Goldsworthy, 2021; Wilson, 2022).
2. Fashion Accessories: Smaller fabric remnants are crafted into mask connectors, hairpins, decorative brooches, and footwear appliqués (Sung, 2017; Sung et al., 2021).
3. Industrial Cleaning Rags: Non-stitchable remnants are bundled as industrial rags and sold to automotive workshops and factories outside Tasikmalaya (Anugerah & Lestari, 2022; Ramdhani & Mulyani, 2021).

In contrast to the linear model in Figure 1, field data also reveal an alternative circular approach. As illustrated in Figure 2, Kawalu fabric scraps are processed througupcyclingiciency upcycling into three functional product categories: (1) secondary fashion, (2) fashion accessories, and (3) industrial rags. This model demonstrates the implementation of circular economy and upcycling principles at the community level.



Source : Data Processed by The Authors

Figure 2. Eco-Efficient Upcycling Model: Functional Product Typologies Derived from Kawalu Fabric Scraps

Waste transfers remain informal and sporadic, with larger embroidery shops supplying raw scraps free of charge to smaller artisan collectives or home-based workers (Anugerah & Lestari, 2022; Ramdhani & Mulyani, 2021). Without supportive municipal policy frameworks, eco-efficiency adoption across the broader Kawalu cluster remains partial (Environmental Agency of Tasikmalaya City, 2024; Hassini et al., 2021).

Discussion

Eco-Efficiency Integration in Traditional Creative Clusters

The traditional industrial practices in Kawalu illustrate the limitations of a linear "take-make-waste" economic model. Stahel (2019) notes that linear models cause ecological degradation by assuming ecosystems have unlimited waste-absorption capacity. Discarding or burning non-biodegradable synthetic scraps transfers long-term environmental costs to the public (Hassini et al., 2021; Pauliuk et al., 2021). The gap between Tasikmalaya's limited ecological carrying capacity and high waste generation highlights the need for cleaner production paradigms (Halstenberg et al., 2021; Irawan & Juliati, 2021).

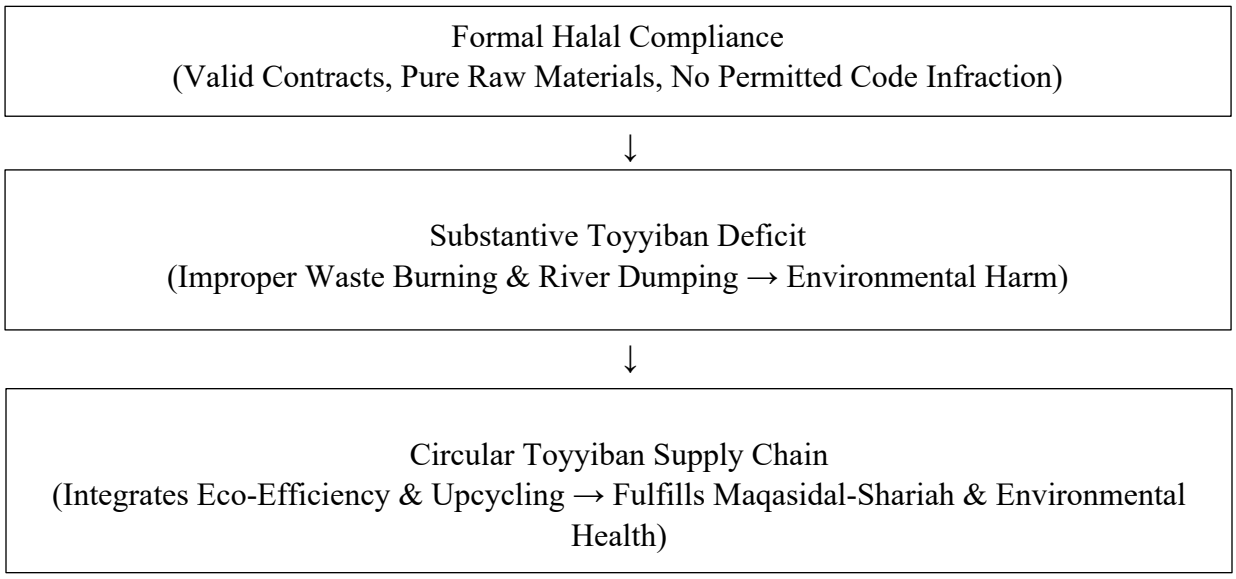
Evaluated against eco-efficiency criteria (DeSimone & Popoff, 1997), upcycling practices in Kawalu address three core indicators: material intensity reduction, product life-cycle extension, and value creation (Halstenberg et al., 2021; Pauliuk et al., 2021). Utilizing fabric scraps reduces demand for virgin synthetic fibers in secondary fashion production (Fletcher & Grose, 2021; Shirvanimoghaddam et al., 2020). Financially, upcycling alters cost structures for SMIs; expenses related to waste hauling or informal pollution penalties are reduced and replaced by revenues from upcycled product sales (Awasthi et al., 2023; Irawan & Juliati, 2021).

However, expanding eco-efficiency initiatives across Kawalu faces structural and cultural barriers. Most primary embroidery owners do not engage in upcycling directly due to time constraints, limited design skills, and lack of specialized green market channels (Kosasih & Budiman, 2020; Rusyani et al., 2019). Diverting fabric remnants into creative secondary items reinserts waste materials into productive economic supply chains, validating circular business principles within small-scale traditional industries (Awasthi et al., 2023; Stahel, 2019; Sung, 2017).

Theological Re-evaluation Through the Halalan Toyyiban Lens

Evaluating waste management practices in Kawalu through an Islamic legal and ethical lens requires distinguishing formal *halal* compliance from substantive *toyyib* principles. In terms of formal compliance (*halal bi dzatihi*), embroidery manufacturing in Kawalu meets basic Islamic criteria (Beik & Arsenyi, 2021; Djakfar, 2021). Synthetic silk, cotton, wool, and polyester threads are ritually clean, and labor agreements between capital owners (*sahib al-mal*) and workers follow standard Islamic transaction jurisprudence (*fiqh al-muamalat*) (Fauzi & Hidayat, 2023).

Evaluating waste management in Kawalu requires distinguishing between formal halal and substantive toyyib dimensions. As illustrated in Figure 3, while embroidery production in Kawalu fulfills formal halal compliance *halal bi dzatihi* in terms of pure raw materials and valid contracts *fiqh al-muamalat*, it still exhibits a substantive toyyiban deficit due to improper waste burning and river dumping. Therefore, achieving a complete *Halalan Toyyiban* status necessitates a transition toward a circular toyyiban_ supply chain that integrates eco-efficiency and upcycling principles to fulfill Maqasid Shariah and ensure environmental health.



Source : Data Processed by The Authors

Figure 3. Theological Re-evaluation Framework: Transition from Formal Halal Compliance to Circular Toyyiban Supply Chain in the Kawalu Embroidery Industry

However, formal compliance remains incomplete if evaluated against *toyyiban* principles. In Islamic economics, supply chains from production to disposal should protect ecosystems and prevent harm (*la darar wa la dirar*) (Al-Qaradawi, 2007; Chapra, 2000; Fauzi & Hidayat, 2023). Uncontrolled dumping or open burning of synthetic scraps contaminates water channels and air quality, conflicting with environmental stewardship principles (*al-fasad fi al-ard*) (Al-Qaradawi, 2001; Mangunjaya, 2019). Beautifully embroidered garments cannot be fully classified as *toyyib* if production processes generate unmitigated environmental health burdens for neighboring communities (Beik & Arsenyi, 2021; Mangunjaya et al., 2022).

Consequently, upcycling fabric scraps using eco-efficiency principles aligns with communal obligations (*wajib kifayi*) within Islamic eco-theology (Al-Qaradawi, 2001; Fauzi & Hidayat, 2023). Preserving ecological balance and avoiding resource wastefulness (*tabzir*) support core objectives of *Maqasid al-Shariah*, specifically protecting life and the environment (Chapra, 2000; Qutb, 2004). Sorting, stitching, and repurposing scraps into brooches or tote bags operationalize Qur'anic injunctions against resource destruction and environmental imbalance (*mizan*) (Al-Qaradawi, 2007; Mangunjaya, 2019).

Table 1. Eco-Efficiency & Halalan Toyyiban Operational Matrix

Dimensions	Eco-Efficiency Indicators	Halalan Toyyiban Objectives
Input	Material Intensity Reduction	Prevention of Resource Waste (Tabzir Injunction)
Process	Waste Stream Minimization	Protection of Public Life & Ecosystems (Hifdh al-Nafs/Biah)
Output	Product Value Enhancement	Generation of Beneficial & Pure Livelihood (Toyyib Provision)
Economic Impact	Cost Elimination & Revenue Gain	Communal Welfare Enhancement (Maslahah Ammah)

Source : Data Processed by The Authors

Integrating eco-efficiency and *halalan toyyiban* yields an operational model: the *Circular Toyyiban Supply Chain*. Within this framework, ecological efficiency and upcycling value creation serve as means to fulfill public welfare (*maslahah ammah*) (Beik & Arsenyi, 2021; Fauzi & Hidayat, 2023). Reducing waste, cutting emissions, and creating home-based income opportunities for women in Kawalu reflect business practices that combine material return with social and environmental responsibility (Anugerah & Lestari, 2022; Stahel, 2019).

Socio-Economic Implications and Strategic Governance

The integration of upcycling practices and ethical awareness contributes to socio-economic stability in Kawalu District. Upcycling networks, predominantly managed by women, provide supplemental income for families of seasonal embroidery workers vulnerable to order fluctuations

(Anugerah & Lestari, 2022; Ramdhani & Mulyani, 2021). Converting zero-cost fabric remnants into commercial fashion accessories demonstrates how sharia-compliant circular practices can reduce environmental waste while supporting local income generation (Awasthi et al., 2023; Beik & Arsenyi, 2021).

To expand these circular practices, municipal authorities in Tasikmalaya could establish dedicated textile waste banks (*Bank Sampah*) in Kawalu to connect primary embroidery producers with upcycling artisans (Department of Cooperatives, SMEs, Industry, and Trade of Tasikmalaya City, 2024; Environmental Agency of Tasikmalaya City, 2024). Such institutional measures can support Kawalu's development as a green creative enterprise cluster that combines economic competitiveness with environmental management (Hassini et al., 2021; Kosasih & Budiman, 2020; Stahel, 2019).

CONCLUSION

This study concludes that implementing eco-efficiency through fabric scrap upcycling strategies in the Kawalu embroidery industry, Tasikmalaya, effectively transforms ecological waste into valuable creative commodities. Upcycling reduces synthetic textile waste volume in local residential environments while lowering waste handling costs for business owners. From a *halalan toyyiban* perspective, this marks a transition from linear production practices to a circular supply chain that supports public welfare (*toyyib*). These findings align with existing research showing that pre-consumer upcycling in local fashion industries elevates material value while mitigating environmental impacts associated with open waste burning.

Theoretically, this research contributes a *Circular Toyyiban Supply Chain* model that links circular operations management with Islamic business ethics. Practically, it highlights opportunities to strengthen income stability for lower-income households in Kawalu. Strategically, municipal authorities in Tasikmalaya are advised to support institutional frameworks, such as dedicated textile waste banks, to connect primary embroidery SMIs with women-led upcycling initiatives. This policy direction aligns with industrial cluster literature emphasizing the role of regulatory support and multi-stakeholder partnerships in driving green transitions.

This study has limitations, including its qualitative single-case design focused exclusively on Kawalu District, which limits direct generalization to textile clusters with different socioeconomic characteristics. Additionally, quantitative assessments of carbon emission reductions or formal Life Cycle Assessments (LCA) were beyond the scope of this inquiry. Future research should employ mixed-method designs incorporating quantitative environmental audits to evaluate the ecological performance of upcycled products under *halalan toyyiban* frameworks.

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