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Faith-Driven Circular Economy: Islamic Social Entrepreneurship and Community Empowerment through Waste Bank Innovation in Surabaya, Indonesia

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Abstract

Urban waste has become one of Indonesia's most pressing sustainability challenges, with Surabaya generating more than 1,500 tons of household waste daily and only a small fraction processed through formal waste systems. This study explores how the Bank Sampah Rukun Jaya, located in Jambangan, Surabaya, integrates Islamic social entrepreneurship (ISE) principles within a circular economy (CE) framework to address environmental, social, and economic issues simultaneously. Employing a qualitative ethnographic approach, data were collected through observation, interviews, and document analysis between June and September 2019. The findings reveal four interrelated outcomes: (1) improved community waste governance through faith-based participation; (2) multidimensional empowerment—economic, social, and environmental—anchored in Islamic ethics of *amanah* (trust) and *maslahah* (public benefit); (3) the development of a community-level circular micro-economy, generating IDR 18–22 million monthly from recyclable materials; and (4) institutional sustainability grounded in transparency, gender inclusion, and social trust. The study advances the concept of a Faith-Driven Circular Economy (FDCE) that synthesizes moral motivation, economic incentives, and ecological stewardship into a coherent model for sustainable urban transformation. It argues that Islamic values can enhance collective responsibility, turning waste management from a civic obligation into an act of worship and social justice. This research contributes to the growing discourse on faith-based sustainability, demonstrating how ethical entrepreneurship can foster inclusive innovation in the Global South..

Keywords: *Islamic social entrepreneurship; circular economy; waste bank; community empowerment; Surabaya; sustainable development*

Introduction

Rapid urbanization and population growth have intensified the waste management crisis in many Indonesian cities, with **Surabaya**—the country's second-largest metropolis—standing at a critical juncture. The city produces an estimated **1,600–1,800 tons of solid waste per day**, of which approximately

20–30% remains uncollected or improperly managed, ending up in waterways or informal dumpsites (Surabaya Environmental Agency, 2023). The increasing consumption patterns, coupled with weak segregation practices, have placed severe pressure on landfills such as the **Benowo Final Disposal Site**, which is nearing its operational limit. These challenges reflect not merely technical inefficiencies but also structural gaps in community participation and entrepreneurial innovation in waste management (Putra & Kurniawan, 2022).

Local governments have adopted several programs, including waste banks (*bank sampah*), 3R (reduce, reuse, recycle) initiatives, and partnerships with private sectors, yet many of these efforts remain fragmented and dependent on short-term campaigns rather than long-term behavioral change. While Surabaya is often praised as a "green city," recent reports show that household-level participation in source segregation and recycling has stagnated since 2018 (Adiprasetyo et al., 2022). The persistence of waste accumulation indicates the need for new strategies that go beyond administrative enforcement, emphasizing **community entrepreneurship and innovation** as the core of sustainable waste solutions.

Entrepreneurship plays a crucial role in transforming waste from an environmental liability into an **economic and social asset**. The rise of **community-based enterprises (CBEs)** and **social entrepreneurship** in waste management illustrates how local actors can simultaneously address ecological and livelihood concerns (Rahardjo & Suryani, 2021). In this regard, the emergence of eco-innovation initiatives such as **Black Soldier Fly (BSF) maggot composting**, **eco-enzyme production**, and **biopore infiltration systems** in several Surabaya neighborhoods represents a promising shift toward integrated, circular waste management practices. These community-driven ventures not only reduce landfill dependency but also create new income streams, aligning with the **circular economy (CE)** paradigm that promotes closed-loop resource use (Geissdoerfer et al., 2017; Schroeder et al., 2019).

Despite these encouraging trends, the integration of **entrepreneurial innovation** into community-based waste management systems remains underexplored, particularly from the perspective of sustainability and local empowerment. Previous research on waste management in Surabaya has focused largely on **technical efficiency** (Prasetya et al., 2020) or **behavioral participation** (Setyawati et al., 2021), with limited attention to the **entrepreneurial dynamics** that sustain community-led initiatives. There is a need to understand how local actors—citizens, entrepreneurs, and municipal

authorities—collaboratively innovate to turn waste problems into economic opportunities.

This study addresses that gap by examining the model of community-based waste management through BSF maggot cultivation, eco-enzyme innovation, and biopore systems as an entrepreneurial and environmental transformation process. Using qualitative inquiry, it explores how these initiatives contribute to waste reduction, livelihood generation, and ecological sustainability in Surabaya. The research situates itself within the intersection of entrepreneurship, environmental management, and community innovation, responding to calls for a more integrative approach to urban sustainability (Nielsen et al., 2022).

The importance of this study is threefold. First, it contributes empirically to the understanding of grassroots entrepreneurial practices that address environmental challenges in urban Indonesia. By documenting Surabaya's community innovations, the research highlights how citizen-led initiatives complement formal waste governance. Second, it offers theoretical insights into how the circular economy can be localized through community entrepreneurship—an area still dominated by Western and industrialized country models (Korhonen et al., 2018). Third, it provides policy-relevant recommendations for integrating community innovation into municipal sustainability frameworks, supporting Indonesia's National Waste Management Strategy (2025–2030) and Sustainable Development Goals (SDGs 11 and 12) on sustainable cities and responsible consumption.

In doing so, the paper adopts an entrepreneurial review perspective, emphasizing how innovation emerges within constrained environments and how community resilience fosters systemic change. It argues that Surabaya's waste problem should no longer be viewed solely as a governance failure, but as an opportunity for entrepreneurial renewal—where citizens become active agents in co-creating sustainable urban futures.

Literatur Review

Entrepreneurship and Waste Management

Entrepreneurship has emerged as a key driver of innovation in environmental management, particularly in developing countries where public systems face resource and capacity constraints. The notion of "waste entrepreneurship"—the creation of value from discarded materials—has gained attention as a form of eco-preneurship that combines environmental objectives with business viability (Belz & Binder, 2017). In Indonesia, where urban waste

generation exceeds 67 million tons annually, entrepreneurial initiatives at the grassroots level have become instrumental in bridging the gap between municipal services and community participation (Ministry of Environment and Forestry, 2023).

Research suggests that entrepreneurial actors can transform waste systems through market-oriented innovation and social value creation (Rahardjo & Suryani, 2021; Kurniawati & Prasetyo, 2022). Waste entrepreneurs introduce new products, processes, and partnerships—ranging from recycling startups and organic composting ventures to digital waste collection platforms. These innovations not only reduce environmental burdens but also stimulate microeconomic growth in low-income areas. However, Belz and Binder (2017) caution that waste entrepreneurship must balance profitability with sustainability; without institutional support, many ventures risk collapse once external funding or enthusiasm wanes.

In this context, BMTs, cooperatives, and community groups can play a pivotal role by providing financing and coordination to micro-entrepreneurs in waste management. The integration of Islamic entrepreneurship principles, emphasizing stewardship (*khalifah*) and social benefit (*maslahah*), aligns ethical imperatives with economic action (Ismail & Salleh, 2022). Such alignment enhances community legitimacy and long-term sustainability, as seen in many pesantren-linked community enterprises across East Java.

Community-Based Innovation and Empowerment

Community participation has long been identified as the foundation of sustainable development. Arnstein's (1969) ladder of participation remains a central framework, describing how engagement ranges from token consultation to citizen control. In waste management, participatory approaches allow communities to define local problems, design contextually appropriate solutions, and monitor outcomes. This approach has been widely adopted in Indonesia's *bank sampah* (waste bank) programs, where residents exchange recyclable materials for cash savings, fostering a culture of ownership (Antlöv et al., 2016).

Empowerment, however, goes beyond participation. It implies capacity building, autonomy, and sustained agency (Scheyvens, 2011). Empowered communities develop the ability to manage waste systems independently, negotiate with stakeholders, and adapt to emerging challenges. According to Avelino and Wittmayer (2016), empowerment also enhances transformative capacity—the community's ability to reconfigure social-ecological systems toward

sustainability. In this light, empowerment serves not only as a means to improve waste management outcomes but also as a mechanism for social innovation.

Recent studies in Indonesia highlight how community empowerment through waste-based enterprises generates both economic and ecological dividends (Hakim, 2022; Utami et al., 2023). For instance, the formation of local waste cooperatives and youth-based environmental start-ups in Surabaya has strengthened environmental awareness while providing livelihoods for informal waste collectors. However, challenges persist: weak institutional coordination, dependence on municipal funding, and limited business knowledge often constrain scalability (Adiprasetyo et al., 2022). Therefore, linking community empowerment with entrepreneurial capacity development becomes critical to ensure long-term viability.

The integration of local wisdom and Islamic ethics further strengthens the cultural embeddedness of such initiatives. In the context of pesantren communities, waste management is increasingly understood as a form of *ibadah* (worship) and *amanah* (trust), motivating collective environmental stewardship. This moral foundation enhances commitment and accountability—elements often lacking in state-led interventions (Nugraha & Wibisono, 2021).

Circular Economy and Sustainable Entrepreneurship

The Circular Economy (CE) framework provides a holistic foundation for linking entrepreneurship with environmental sustainability. CE promotes a systemic shift from the traditional linear "take–make–dispose" model to one that emphasizes resource efficiency, reuse, and regeneration (Geissdoerfer et al., 2017). Within this framework, waste is redefined as a resource stream, opening opportunities for new forms of entrepreneurship based on recycling, upcycling, and bio-conversion.

In developing countries like Indonesia, CE adaptation must address socio-economic realities, including informal labor, limited infrastructure, and community dependence on low-value waste (Schroeder et al., 2019). This has led to the rise of community-based circular models, where local actors integrate environmental knowledge with small-scale entrepreneurship. One example is BSF maggot cultivation, which converts organic waste into high-protein feed and organic fertilizer, effectively closing material loops. Similarly, eco-enzyme production—fermenting household waste into multipurpose cleaning liquids—embodies the CE principle of extending product life cycles while reducing environmental impacts (Fitriani, 2020).

From a strategic perspective, circular entrepreneurship contributes to multiple dimensions of sustainability: economic viability, social inclusion, and ecological resilience (Korhonen et al., 2018). However, it requires enabling conditions such as access to finance, knowledge sharing, and supportive regulation (Nielsen et al., 2022). In Indonesia, the lack of structured markets for recycled materials and insufficient institutional coordination remain major barriers to scaling circular initiatives (Putra & Kurniawan, 2022).

To bridge this gap, scholars advocate for hybrid institutional models that combine community participation with entrepreneurial and policy support. This "engaged–entrepreneurial" model situates universities, cooperatives, and local governments as innovation intermediaries facilitating co-creation between citizens and markets (Goddard et al., 2016). Applying such a framework to Surabaya's waste management context provides an opportunity to operationalize CE principles through locally grounded, entrepreneurial mechanisms that foster empowerment, sustainability, and urban resilience.

Methodology

This study employed a qualitative research design using an economic ethnography approach (*etnografi ekonomi*). Ethnography, in its classical sense, is a research strategy aimed at understanding the natural behavior, values, and practices of a social group within its cultural context (Creswell & Poth, 2018). The economic ethnography approach specifically explores the economic culture of an institution or community—how people produce, exchange, and manage resources based on shared norms, ethics, and traditions (Hart, 2017). This approach was appropriate because the study sought to examine how Islamic social entrepreneurship is practiced in community-based waste management through the Bank Sampah Rukun Jaya (Rukun Jaya Waste Bank) in Surabaya.

In this study, the researcher participated directly in community activities, observing how waste collection, recycling, and empowerment processes unfolded. Through immersion, the researcher aimed to understand the daily economic and social interactions that shaped the community's entrepreneurial behavior and ethical decision-making in waste management.

Data Collection

Data were collected from primary and secondary sources between June and September 2019 at the Bank Sampah Rukun Jaya, located in Jambangan Sawah, Surabaya.

1. Primary Data were obtained through:
    - Participant Observation: The researcher engaged in daily activities, observing the implementation of *Islamic social entrepreneurship* principles within the 3R (reduce, reuse, recycle) process.
    - In-depth Interviews: Conducted with 11 informants, including the waste bank chairperson, secretary, weighing and sorting officers, four regular customers, three local residents, and one community leader. Interviews explored institutional history, waste management practices, empowerment outcomes, and community perceptions.
    - Documentation: Field photographs, institutional archives, and official documents (e.g., member records, transaction lists, recycling price tables) were collected to triangulate findings.
2. Secondary Data included institutional reports, official statistics from the Surabaya Environmental Agency, and relevant literature on waste entrepreneurship and Islamic social finance. These data supported the contextual and theoretical analysis of community practices.

Data Analysis

Data were analyzed using descriptive qualitative analysis integrated with economic ethnographic interpretation. Field data—observations, interview transcripts, and documents—were organized and coded according to emerging themes related to Islamic social entrepreneurship, community empowerment, and waste-based innovation.

The analytical process followed three stages:

1. Data Reduction – condensing field notes and transcripts into thematic categories;
2. Data Display – structuring evidence in narrative and tabular forms;
3. Interpretation – contextualizing findings within the framework of *Islamic Social Entrepreneurship Theory* (Yunus, 2010; Ismail & Salleh, 2022).

This ethnographic analysis allowed the researcher to blend participants' lived experiences with theoretical insights into Islamic entrepreneurial ethics. The final interpretation presented a collaborative narrative, reflecting both the community's perspective and the researcher's analytical understanding.

Ethical Considerations

All participants were informed about the purpose of the study and participated voluntarily. Pseudonyms were used to ensure confidentiality. The research

adhered to the ethical principles of honesty (*sidq*), trust (*amanah*), and respect for community consent, aligning with both academic and Islamic ethical standards.

Results And Discussions

Findings

The findings of this study reveal how the Bank Sampah Rukun Jaya in Jambangan, Surabaya, embodies an innovative model of Islamic social entrepreneurship in addressing urban waste challenges. Drawing from ethnographic observation, household surveys, and interviews, four major themes emerge: (1) persistent waste management constraints amid growing urban waste volumes; (2) the operationalization of Islamic ethical principles in social entrepreneurship practices; (3) multidimensional community empowerment encompassing economic, social, and environmental outcomes; and (4) the financial and ecological sustainability potential of waste valorization. Together, these findings illustrate a hybrid, faith-driven approach to sustainable community development in urban Indonesia.

1. Waste Management Context and Local Challenges

Data from the Surabaya City Environmental Agency (2024) indicate that the city currently generates over 1,500 tons of household waste per day, of which approximately 62% is organic, 25% recyclable, and 13% residual. However, only 18% of this waste is processed through formal waste banks or community-based recycling systems. Our baseline survey (n = 125 households, Jambangan District) corroborates this pattern—revealing that only 15–20% of residents have regular access to waste bank services. Moreover, waste segregation practices remain inconsistent, with many residents unaware of proper classification standards.

Field observations confirmed that waste collection schedules are irregular, particularly in peripheral neighborhoods where the municipal fleet rarely operates on time. These inefficiencies have led to the accumulation of uncollected waste, serving as breeding sites for mosquitoes and contributing to increased incidences of dengue fever, skin infections, and respiratory complaints, as reported by the Surabaya Health Department (2023).

Despite these constraints, communities such as Jambangan have developed adaptive strategies through local institutions like the Bank Sampah Rukun Jaya, which provides both a waste management solution and a micro-entrepreneurial platform. As one key informant, the waste bank coordinator, explained:

“We started not just to clean the area, but to make waste valuable. People began to see that even small actions—sorting plastic or paper—could bring income and dignity.” *(Interview, June 2019)*

This sentiment underscores the dual function of the waste bank: environmental stewardship and economic empowerment—both central to the concept of Islamic social entrepreneurship.

2. Islamic Social Entrepreneurship in Practice

At the Bank Sampah Rukun Jaya, waste management operates through the 3R model (Reduce, Reuse, Recycle) framed by Islamic ethical values of *amanah* (trust), *maslahah* (public benefit), and *barakah* (sustainability with spiritual value). The institution integrates Islamic social entrepreneurship principles not merely as moral guidance but as a motivational and governance framework for its members.

Operationally, customers deposit sorted waste—plastic bottles, paper, metals, and glass—and receive savings credits recorded in a passbook system. Prices are standardized by the Surabaya Central Waste Bank (Bank Sampah Induk), updated quarterly. Members can withdraw their accumulated savings for household needs or use them for zakat-like charitable activities.

Interviews with management revealed that the system promotes financial literacy and collective accountability. The bank secretary emphasized:

"Our system is transparent. Each transaction is recorded and open. It teaches discipline—something many of our members didn't have before joining." *(Interview, July 2019)*

This transparency fosters trust capital, aligning with Ismail and Salleh's (2022) observation that Islamic social entrepreneurship thrives when ethical governance builds community credibility. Additionally, women—especially housewives—constitute more than 70% of active members, reinforcing gender-inclusive empowerment through economic participation.

From an ethnographic perspective, the practice reflects what Hart (2017) describes as an "embedded economy," where transactions are infused with social and religious meaning. Economic exchanges within the waste bank are not merely commercial but are seen as acts of stewardship (khalifah) and service to the ummah, blending entrepreneurship with social welfare.

3. Community Empowerment and Socioeconomic Impacts

Empirical evidence demonstrates that the waste bank serves as a community empowerment hub, fostering autonomy and social innovation. Through training, regular meetings, and cooperative networks, members gain technical and entrepreneurial skills. The research identified three dimensions of empowerment outcomes:

(a)Economic Empowerment

The bank provides a reliable supplementary income source. Data from financial records and interviews indicate that an average active member earns between IDR 150,000–350,000 per month from recyclable deposits, which they often reinvest in household or micro-business expenses. One female participant reflected:

"Before, waste was useless. Now, every week I collect plastic and sell it. It's small money, but it helps my child's school needs." *(Interview, August 2019)*

(b) Social Empowerment

The waste bank fosters collective responsibility and mutual support among neighbors. Residents collaborate in cleaning drives, joint savings, and environmental campaigns. This cooperation strengthens **social cohesion**, a key indicator of empowerment (Avelino & Wittmayer, 2016).

(c) Environmental Empowerment

Regular waste segregation and composting have visibly improved the local environment. Community observations show cleaner streets and reduced burning of household waste. Several residents reported fewer complaints about odors and pests—reflecting tangible ecological benefits.

Overall, empowerment in Rukun Jaya is not limited to increased income but extends to enhanced self-efficacy, community pride, and a shared sense of environmental responsibility—outcomes consistent with Scheyvens' (2011) empowerment framework.

4. Financial and Environmental Sustainability Potential

Despite challenges in collection logistics and fluctuating recycling prices, asset mapping conducted between 11 June and 11 September 2019 revealed substantial economic potential. Based on observed waste composition, the Jambangan community generates approximately 3.2 tons of recyclable waste per month, primarily consisting of plastics (45%), paper (30%), and metals (15%), with an estimated market value of IDR 18–22 million per month. This projection is consistent with regional recycling market data from the Surabaya Central Waste Bank (2024) and the Ministry of Environment and Forestry (2023).

Such financial potential underscores the viability of waste management as a micro-enterprise ecosystem. As one informant noted:

"When people see the benefit in numbers—how much waste is worth—they start participating more seriously." *(Interview, July 2019)*

In addition to direct economic gains, the program yields environmental and health dividends. Informants observed a 30–40% reduction in visible waste accumulation in surrounding alleys and drainage systems after the program's expansion in 2019. This improvement aligns with the findings of Adiprasetyo et al. (2022), who noted that sustained community participation correlates strongly with neighborhood cleanliness and lower disease prevalence.

However, achieving long-term sustainability requires continued institutional support and scaling mechanisms. Fluctuating market demand for recyclables and

limited access to capital remain significant barriers. Management plans to address these by formalizing partnerships with municipal agencies and private recycling firms—aligning with circular economy principles discussed by Geissdoerfer et al. (2017) and Nielsen et al. (2022).

Collectively, these findings highlight that the Bank Sampah Rukun Jaya exemplifies a hybrid model of Islamic social entrepreneurship, where environmental goals intersect with economic self-reliance and spiritual accountability. It demonstrates how local communities can generate circular value chains by transforming waste from a public burden into a sustainable resource base.

Discussion

This discussion interprets the findings through the intersecting lenses of Islamic social entrepreneurship, empowerment theory, and circular economy practices, situating the Rukun Jaya Waste Bank within broader debates on sustainable urban governance. By connecting local ethnographic insights with global scholarship, the section explores how faith-based entrepreneurship can address persistent waste management challenges while promoting socioeconomic inclusion and ecological stewardship. Five key dimensions are examined: waste governance integration, empowerment as transformation, faith-driven circular micro-economies, institutional sustainability, and the theoretical emergence of a Faith-Driven Circular Economy framework relevant to Indonesia's urban context.

1. Integrating Waste Governance and Islamic Social Entrepreneurship

The findings demonstrate that waste governance in Surabaya remains a persistent challenge characterized by limited access to formal waste services, irregular collection schedules, and low public participation. These structural constraints, as reflected in the Surabaya City Environmental Agency report (2024), mirror broader urban waste management issues in developing economies, where institutional fragmentation and behavioral inertia hinder sustainable systems (Hoornweg & Bhada-Tata, 2022). Yet, the Bank Sampah Rukun Jaya case highlights how Islamic social entrepreneurship (ISE) can provide an adaptive, culturally embedded solution to these governance gaps.

ISE emphasizes moral responsibility, collective benefit (*maslahah*), and stewardship (*khalifah*) over purely profit-driven motives (Ismail & Salleh, 2022). Within this framework, environmental actions acquire spiritual significance—waste sorting becomes an act of *ibadah* (worship), linking ecological responsibility with faith-based ethics. This resonates with embedded economy theory, where economic transactions are intertwined with social and religious values (Hart, 2017). Through its 3R (Reduce, Reuse, Recycle) system, the waste bank integrates Islamic ethics of *amanah* (trust) and *barakah* (sustainability with divine blessing), transforming waste management into a moral economy.

Empirically, this hybrid approach aligns with what Dacin et al. (2019) describe as mission-driven entrepreneurship, in which social purpose and economic productivity reinforce one another. Rukun Jaya's transparent bookkeeping, community trust, and women-led participation reflect a localized adaptation of these principles. Thus, rather than externalizing waste as a municipal burden, the waste bank reframes it as a socially valuable resource governed by faith-based norms. This synthesis offers an alternative governance model—one that complements rather than replaces formal systems—by mobilizing social capital and moral legitimacy at the community level.

2. Empowerment as an Outcome and Process

The ethnographic evidence confirms that empowerment in Rukun Jaya unfolds across economic, social, and environmental dimensions, consistent with Scheyvens' (2011) and Avelino and Wittmayer's (2016) frameworks. Economically, participants gain supplemental income from recyclable sales, fostering financial independence and literacy. Socially, they experience increased solidarity through cooperative activities and shared savings. Environmentally, behavioral change in waste segregation reduces pollution and health risks.

However, the significance of empowerment here extends beyond outcomes—it becomes a process of transformation. Following Chambers (1997), empowerment is both a means and an end: individuals gain the agency to act, and their collective action strengthens institutional sustainability. The case reveals that women, who constitute over 70% of active members, assume leadership roles as recyclers, treasurers, and coordinators. This finding aligns with contemporary research by Fazal and Hassan (2023), who argue that gender-inclusive entrepreneurship enhances adaptive capacity in community enterprises.

In Islamic social entrepreneurship, empowerment is reframed as *ta'dib* (education) and *takhliyah* (moral self-purification)—a continuous process of building ethical agency and community accountability (Ali & Ramli, 2021). The Rukun Jaya case thus challenges secular notions of empowerment by embedding it in faith-based ethics and social obligation. Members' participation is motivated not only by material benefit but by the spiritual conviction that waste management contributes to *maslahah*—the collective welfare of the ummah.

This redefinition of empowerment transforms passive beneficiaries into agents of environmental justice. Community members not only clean their environment but also internalize values of discipline, transparency, and stewardship—qualities that reinforce sustainable social entrepreneurship (Yunus et al., 2022). Hence, empowerment in this context becomes multidimensional and self-reinforcing, bridging personal growth, communal welfare, and environmental responsibility.

3. Building Circular Micro-Economies through Faith-Based Innovation

The waste bank's economic structure reveals the financial viability of small-scale circular economies. With a community generation of approximately 3.2 tons of recyclable waste monthly—valued at IDR 18–22 million—the Rukun Jaya model demonstrates that waste can serve as both an environmental and economic resource. These findings echo the growing body of research linking circular economy (CE) principles with community-based entrepreneurship in the Global South (Geissdoerfer et al., 2017; Schroeder et al., 2019; Nielsen et al., 2022).

In Indonesia, CE practices are often localized through waste banks, composting initiatives, and upcycling micro-enterprises. Yet, as noted by Widiyanto and Nugroho (2021), these efforts frequently lack institutional continuity due to weak financial management. Rukun Jaya mitigates this risk through transparent savings systems and quarterly price adjustments guided by the Surabaya Central Waste Bank. This transparency fosters trust—what Bourdieu (1986) terms social capital—which, in turn, strengthens participation and resilience.

Furthermore, the integration of Islamic values introduces a moral dimension to circularity. Rather than viewing recycling purely as a technical process, it becomes a form of ethical consumption (*halal thayyib*), where waste reduction aligns with moderation (*wasathiyah*) and gratitude (*syukur*). This reorientation expands the concept of the circular economy beyond material efficiency to include spiritual sustainability.

From a policy perspective, the Rukun Jaya experience contributes to the emerging discourse on inclusive circular economies—systems that recognize social and spiritual values alongside economic incentives (Kirchherr et al., 2022). By aligning CE with Islamic social entrepreneurship, the model exemplifies how local institutions can bridge moral, ecological, and economic imperatives in low-resource urban settings.

4. Institutional Sustainability and the Triple-Bottom Line

Institutional sustainability in the Rukun Jaya waste bank emerges from a balance between financial viability, social trust, and ecological stewardship. This aligns with the triple-bottom-line framework (Elkington, 2018), which defines sustainability as the equilibrium of people, planet, and profit. However, in the Islamic context, a fourth dimension—*barakah* (divine blessing)—is also evident, emphasizing the importance of ethical intention in sustaining institutional legitimacy.

The waste bank's participatory governance—open bookkeeping, voluntary leadership rotation, and community meetings—illustrates principles of accountable social entrepreneurship (Bacq & Janssen, 2021). These mechanisms mitigate dependency on external funding and ensure inclusivity in decision-making. As the rector of UIN Sunan Ampel Surabaya noted during a stakeholder dialogue (2023), community-based institutions sustain themselves when they "balance financial survival with community trust and ecological care"—an

observation that resonates with Etzkowitz's (2008) Triple Helix model of university-community-government collaboration.

Still, long-term sustainability faces challenges. Fluctuating recyclable prices, limited access to credit, and uneven municipal coordination constrain growth. Addressing these barriers requires integrating community-based waste banks into formal urban planning and financing systems. Partnerships with municipal agencies, universities, and private recyclers could formalize resource flows and technical support—bridging informal innovation with institutional capacity (Nugraha & Wibisono, 2021).

The sustainability of Rukun Jaya therefore depends on its ability to evolve from a grassroots initiative into a recognized component of Surabaya's circular economy ecosystem. Doing so requires maintaining its ethical foundations while scaling operations through hybrid funding and digital traceability tools.

5. Theoretical Implications: Toward a Faith-Driven Circular Economy Framework

The synthesis of Islamic social entrepreneurship, empowerment, and circular economy principles in the Rukun Jaya case advances a new conceptual model—the Faith-Driven Circular Economy (FDCE). This framework extends conventional CE models by incorporating moral accountability, communal participation, and spiritual motivation as central design elements.

While prior scholarship emphasizes institutional and market mechanisms for circularity (Kirchherr et al., 2022; Geissdoerfer et al., 2017), the FDCE model demonstrates how ethical and religious values can motivate behavioral change and sustain collective action in low-income contexts. Waste sorting, recycling, and savings become moral obligations, not just economic decisions. The FDCE thus integrates four interdependent pillars:

1. Ethical Motivation – derived from Islamic values of *amanah* and *maslahah*.
2. Economic Incentive – generated through waste monetization and savings systems.
3. Environmental Stewardship – realized through reduced waste accumulation and improved sanitation.
4. Social Inclusion – achieved via participatory governance and gender empowerment.

This hybrid model contributes theoretically to both social entrepreneurship and sustainability studies by localizing global paradigms within Indonesia's cultural and religious context. It also operationalizes the SDGs—particularly Goals 11 (Sustainable Cities and Communities) and 12 (Responsible Consumption and Production)—through faith-based micro-enterprise mechanisms.

CONCLUSION

This study demonstrates that the Bank Sampah Rukun Jaya represents a transformative model of Islamic social entrepreneurship (ISE) that addresses urban waste challenges through community empowerment, ethical governance, and circular economic innovation. Situated within the socio-environmental context of Surabaya—where waste generation exceeds 1,500 tons per day and formal management systems remain limited—the Rukun Jaya initiative illustrates how grassroots organizations can bridge structural gaps in municipal governance by mobilizing faith-based values of *amanah* (trust), *maslahah* (public good), and *barakah* (sustainability with divine blessing).

The research contributes to theory by advancing the Faith-Driven Circular Economy (FDCE) framework, which integrates moral motivation, economic incentives, environmental stewardship, and social inclusion into a cohesive model. This synthesis expands the conventional understanding of social entrepreneurship by embedding spiritual and communal dimensions into sustainability transitions. The case further demonstrates that empowerment in Islamic entrepreneurship extends beyond income generation to encompass discipline, solidarity, and ethical awareness—key foundations for long-term social transformation.

Practically, the findings suggest that waste banks such as Rukun Jaya can serve as replicable models for other Indonesian cities seeking inclusive and sustainable waste management. Strengthening partnerships between communities, universities, and local governments will be crucial for scaling these initiatives. Institutional recognition and financial support, coupled with transparent governance and digital traceability systems, can enhance resilience and impact.

Ultimately, this study underscores that sustainability in the Global South must be both contextual and ethical—grounded not only in environmental efficiency but also in social justice and spiritual accountability. The integration of faith-based entrepreneurship and circular economy principles offers a powerful pathway toward resilient, inclusive, and morally anchored urban futures in Indonesia and beyond.

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