



Locally Based Green Economy: The Role Of Msmes And Community Entrepreneurship In Driving Growth Sustainable Economy In Makassar City

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Abstract: The green economy has become a strategic framework for achieving sustainable development, particularly in developing countries where micro, small, and medium enterprises (MSMEs) play a dominant role in job creation and innovation. This study aims to analyze the role of MSMEs and community-based entrepreneurship in driving sustainable economic growth in the context of Makassar City, Indonesia. The main issue addressed in this study is how local entrepreneurial practices and community initiatives contribute to the realization of a localized green economy model. This study uses a qualitative descriptive approach with data collection through semi-structured interviews with selected MSME owners, community leaders, and local government representatives. The primary data was supplemented with secondary data in the form of policy documents and regional development reports. The analysis was conducted using thematic coding to identify recurring patterns related to environmental awareness, resource efficiency, and socioeconomic empowerment. The study's findings indicate that local MSMEs have begun integrating environmentally friendly practices such as waste reduction, product recycling, and energy efficiency, despite limited institutional support and financial incentives. Furthermore, community entrepreneurship fosters social innovation by linking environmental conservation efforts with improvements in community well-being. This study concludes that the transition to a green economy in Makassar City is driven not only by government policies but also by the collective awareness and adaptive capacity of local actors. Therefore, strengthening collaboration between MSMEs, local governments, and community networks is key to accelerating inclusive and sustainable green economic growth in urban areas in Indonesia. These findings contribute to the global discourse on bottom-up strategies for achieving the Sustainable Development Goals (SDGs) through locally-based green innovation.

Keywords: Green Economy, Community Entrepreneurship, Sustainable Growth.

INTRODUCTION

Efforts towards sustainable development increasingly emphasize the importance of the green economy as a transformative paradigm that aligns economic growth with environmental management and social inclusion (OECD, 2020; UNEP, 2021). In developing countries like Indonesia, where micro, small, and medium enterprises (MSMEs) dominate the production and employment sectors, local entrepreneurship is a crucial agent in accelerating the transition to a green economy (Tambunan, 2019; Bocken et al., Makassar City, as one of the fastest growing



urban centers in Indonesia, offers a dynamic ecosystem to explore how community-based entrepreneurship can integrate ecological awareness into business activities while addressing socio-economic challenges at the local level.

Previous research on the green economy has largely employed a top-down, policy-driven approach, focusing on regulatory frameworks, fiscal incentives, and technological innovation driven by governments or international institutions (Hickel, 2019; Geels, 2020). While these macro-level strategies provide necessary institutional direction, they often neglect local-level behavioral change, grassroots innovation, and community participation these are key drivers of sustainable transformation in urban contexts in developing countries (Sengers et al., 2019; Schot & Kanger, 2018). In contrast, bottom-up approaches focused on community entrepreneurship and local MSMEs have been shown to foster social innovation, resource efficiency, and inclusive green growth (Klewitz & Hansen, 2014; Cohen & Winn, 2007). However, empirical understanding of how these local initiatives contribute to the formation of localized green economy models in Indonesian cities remains limited.

The methodologies used in previous studies have varied, ranging from econometric modeling of the impacts of environmental policies (Zhou et al., 2019) to sustainability performance frameworks integrating life-cycle assessment and circular economy principles (Masi et al., 2018). While quantitative models provide measurable indicators of green performance, these approaches often fail to capture the socio-cultural dynamics underlying local entrepreneurial behavior. In contrast, qualitative exploration provides richer contextual insights into the adaptive capacity of MSMEs but has limitations in terms of generalization and cross- regional comparison (Yin, 2018). Therefore, this study adopts a qualitative descriptive approach complemented by thematic coding analysis to bridge this methodological gap and delve deeper into local realities.

The main problem addressed in this study is: How do local MSMEs and community-based entrepreneurship practices contribute to promoting a localized green economy model in Makassar City? To answer this question, this study proposes a community-centered analytical framework that integrates three key dimensions environmental awareness, resource



efficiency, and socioeconomic empowerment as key determinants of sustainable growth at the local level.

This approach not only highlights the behavioral transformation of local business actors, but also contextualizes their interactions with the institutional ecosystem and public policies.

The main contributions of this research are divided into three aspects. First, empirically, this study documents how MSMEs in Makassar have begun to implement environmentally friendly practices such as waste minimization, recycling, and energy efficiency despite limited institutional support. Second, theoretically, this study expands the discourse on green entrepreneurship toward a localized sustainability model relevant to a growing urban economy. Third, policy-wise, this study identifies potential collaboration pathways between local governments, MSMEs, and community organizations to accelerate inclusive green growth.

The structure of this article is as follows: Section 2 discusses the theoretical foundations of the green economy and community-based entrepreneurship. Section 3 explains the research methodology design, including the data collection process and thematic analysis. Section 4 presents the main findings and discussion regarding MSME practices and community innovation. Section 5 contains conclusions and policy implications, as well as recommendations for future research directions to strengthen the green economy in Indonesia's urban context.

METHOD

Overview

This study proposes a community-centered green economy assessment pipeline tailored to the characteristics of urban MSMEs in Makassar City. This method integrates a qualitative approach through semi-structured interviews and document analysis with structured thematic coding and the calculation of a composite readiness index.

Readiness index) which measures three main dimensions of sustainability, namely:

1. Environmental awareness (E),
2. Resource Efficiency (R), and
3. Socio-Economic Empowerment (SE).



Step-by-Step Procedure

Step 1: Research Design and Sampling Techniques

1. Stratification: MSMEs are diversified by sector (food, craft, services), size (micro/small/medium), and green exposure (low/medium/high).
2. Research design: using a qualitative descriptive approach with analytical formalization, which aims to describe in depth the phenomenon of community- based green entrepreneurship in Makassar City and link it to a localized green economy analysis framework.
3. Sampling technique: carried out through purposive sampling of key actors relevant to the research objectives, namely MSME owners or managers, community leaders, and representatives of local governments involved in policies or programs related to the green economy.
4. Sample stratification: MSMEs are grouped based on three main criteria, namely: Business sector: including food and beverages, crafts, and services. Business size: micro, small, and medium. Green exposure level: low, medium, and high is determined based on the extent to which environmentally friendly practices have been integrated into their respective business processes.

Step 2: Data Collection

1. Instruments: Data were obtained through a semi-structured interview guide designed to explore the perceptions, experiences, and sustainability practices of MSMEs and community stakeholders. Policy documents and regional development reports were also used as secondary data sources to complement empirical information in the field. Relevant. All these artifacts were compiled and analyzed systematically in a thematic coding process.
2. Research ethics: Each participant gave informed consent after an explanation before the interview was conducted. To maintain confidentiality of identity, each respondent was given a unique anonymous code for each participant iysample, so that the data could be analyzed without revealing personal identity.

Data Transcription and Selection

1. The transcription process is carried out verbatim, namely transcribing all interview results according to the original words of the participants without reducing the meaning. After the



transcription process, data cleaning is carried out which includes: Removing information that can personally identify participants, such as names, addresses, or institutions of origin; Normalizing local terms or regional expressions to be consistent with the language of academic research, while still maintaining the contextual meaning conveyed by the participants.

2. This step ensures that the data used for analysis is clean, ethical, and still authentically reflects the socio-cultural context of Makassar City.

Step 4: Thematic coding (codebook development)

- Codebook construction: deductive seeds (E, R, SE) + inductive subcodes from pilot interviews.
- Coder training: two coders annotate a shared calibration set.
- Inter-coder reliability: Cohen's k calculated for each code:

$$k = \frac{O_y}{1 + y}$$

where O_y is observed agreement, targeted before full coding.

y is chance agreement. Threshold $k \geq 0.70$

For each MSME and code be the count of code, d segments. Define normalized code weights:

$$w_k = \frac{count_{code}}{d}$$

Optionally, emphasize discriminative signals with TF-IDF-style scaling:

$$w_k = \frac{count_{code}}{1 + \dots}$$

where \dots is the number of MSMEs with $\dots > 0$

Let S_1, S_2, S_3 be the code sets for the three dimensions with within-dimensional weights k (default equal unless policy priorities justify otherwise, subject to $\sum_k w_k = 1$). The dimension scores are:

$$S_1 = \sum w_k p_i, \quad S_2 = \sum w_k p_i, \quad S_3 = \sum w_k p_i, \quad k$$



Aggregate into the Localized Green-Economy Readiness Index (LGERI):

$LGERI_i = \bar{y}E_i + \bar{y}R_i + \bar{y}SE_i$, $\bar{y} + \bar{y} + \bar{y} = 1$, with $(\bar{y}, \bar{y}, \bar{y})$ reflecting strategic emphasis (eg, equal weights or policy-driven priorities).

City-level readiness is the convex combination

$$LGERI_i = \bar{y}_v LGERI, \bar{y}_v = 1$$

where are aggregation weights (equal, revenue-share, or employment-share).

Step 6: Validation and Resilience

1. Triangulation method: carried out by matching interview themes with policy documents and community records to ensure consistency between empirical findings and secondary data sources.
2. Sensitivity analysis: carried out by varying the weight parameters $(\bar{y}, \bar{y}, \bar{y})$ on the simplex grid, then reporting the range of Local Green Economy Readiness Index (LGERI) values for Makassar City as well as rank stability between parameter combinations.
3. Reliability test: carried out by recalculating the index scores using two different approaches, namely tf-idf weighting and raw frequency $p_{i,k}$, then checking the rank correlation (Spearman's \bar{y}) to assess the consistency of the calculation results.
4. Data credibility: strengthened through member checking, which is the process of verifying findings with key informants, to ensure that the researcher's interpretation is in line with the respondents' experiences and views.

Step 7: Pattern Synthesis and Comparative Analysis

1. Comparison of MSMEs with high and low LGERI: Researchers contrasted the characteristics of MSMEs with high and low LGERI values to identify internal and external mechanisms that differentiate their green adaptation capacity. The mechanisms extracted include: Waste-to-resource loops, Energy-saving routines, and Community partnership models that support resource efficiency and social empowerment.
2. Identifying collaboration patterns: Next, we mapped collaborative motives among MSMEs, community groups, and local government institutions to understand how social and institutional



networks shape sustainable cooperation patterns. This analysis helps explain how synergies between local actors accelerate the transition to an inclusive and adaptive urban green economy.

Step 8: Collaborative Policy and Maps

1. Based on the analysis patterns, this study formulates collaboration pathways that can be applied to strengthen the green economy transition at the city level. These collaborative patterns are translated into policy recommendations that can be implemented through various forms of synergy.
2. Develop a roadmap that links MSME green practices with targets Sustainable Development Goals (SDGs)

RESULTS AND DISCUSSION

Hardware, Software, and Data Sources

The qualitative study was conducted using the following technical setup:

1. Hardware & environment: A standard laptop with Intel i5 4-core CPU, 16 GB RAM, running Windows 10. Audio recordings were made using a Zoom H1n portable recorder.
2. Software tools:
 - a. NVivo 12 (QSR International) for qualitative coding and node management
 - b. Microsoft Excel for tabulation and calculation of code frequencies and dimensions scores
 - c. SPSS v25 for non-parametric sensitivity analyzes (eg Spearman's ρ)
3. Dataset and Data Sources:
 - Primary data: Collected through 30 semi-structured interviews, involving: 8 MSME owners or managers from various sectors (food, crafts, and services); 8 local community leaders who are active in social and environmental activities; and 7 local government officials related to the economic and sustainable development sectors.
 - Secondary data: Includes policy documents such as the Makassar City Regional Development Plan (RPJMD) 2023–2028, regulations related to the green economy, city statistical reports, and reports from local non-governmental organizations (NGOs) focused on economic and environmental empowerment.

An initial familiarization process with the interview transcripts revealed several recurring



themes, including: “funding limitations,” “waste recycling initiatives,” “energy efficiency adoption,” and “community training programs.” These themes were then used to construct subsequent rounds of thematic coding, allowing for a more focused and contextualized analysis.

Initial Data Analysis & Coding Outcomes

The codebook includes 45 codes across the three dimensions (E, R, SE). Inter-coder reliability resulted in Cohen's $\kappa = 0.78$ (above the 0.70 threshold).

Dimension	Top Code	Total Count	Weight (w_k)	Interpretation
E (Environmental awareness)	"waste-reduction practice"	87	0.25	Many actors actively reduce waste
E	"eco training"	65	0.19	Trainings contribute to awareness
R (Resource efficiency)	"material reuse"	92	0.23	Strong emphasis on reuse loops
R	"energy saving"	70	0.18	Adoption of LED, solar in some cases
SE (Socio-economic empowerment)	"community engagement"	105	0.30	Community networks drive uptake
SE	"income diversification"	78	0.22	Green products supply new income streams

Table 1. Shows the top 5 most frequent codes per dimension by count and normalized weight

From these counts, dimension scores were calculated for each MSME using the formulas in Section 3.2. Aggregated city readiness score LGERI city was calculated with equal weights $\bar{y} = \bar{y} = 1/3$. The result: $LGERI_{city} = 0.67$ (on scale 0–1)

Sensitivity analysis (varying weights) yielded a range of 0.63 to 0.72, with Spearman's $\rho = 0.94$ relative ranking stability, indicating robustness.

Main Findings and Thematic Synthesis

Findings Based on Coding and Index Results

Theme 1: Integration of Environmentally Friendly Practices from the Grassroots: Many MSMEs, even small-scale ones, have integrated waste reduction, product recycling, and energy efficiency practices into their daily operations. An MSME owner in the craft sector stated: “We collect plastic waste from the community and reprocess it into raw materials for packaging.” This finding confirms the initial hypothesis (H1) that local entrepreneurial practices significantly contribute to



the formation of a localized green economy model.

Interestingly, most of these initiatives took place without significant external support, demonstrating strong adaptive capacity at the grassroots level.

Theme 2: Community Networks as Catalysts: Community-based entrepreneurship has proven to be a crucial bridge connecting MSMEs with social and environmental awareness. Many respondents mentioned that community groups actively organize training, joint waste collection, and knowledge-sharing activities. This aligns with the second hypothesis (H2) that community participation strengthens institutional reach and increases the effectiveness of green policy implementation. Community engagement also increases visibility and accelerates the replication of environmentally friendly practices among economic actors.

Theme 3: Limited Institutional Support and Enabler Gaps: Although MSMEs and community actors demonstrate strong initiative, institutional support such as funding, technical assistance, and regulatory incentives remains inconsistent. Several respondents cited bureaucratic barriers and the absence of integrated green policy mechanisms at the city level. This situation indicates weaknesses in the external dimension. Although strengths emerge from bottom-up actors, institutional enabler gaps hinder the acceleration of the transition to an inclusive and sustainable green economy.

Discussion: Implications and Interpretation

The results of this study provide several important insights that deepen understanding of the role of MSMEs and community entrepreneurship in accelerating the locally-based green economy in Makassar City:

1. Bottom-up momentum is crucial. While macroeconomic policies remain important, real change in Makassar has emerged from local actors demonstrating the ability to innovate directly on the ground (in situ innovation). This confirms that bottom-up initiatives play a central role in strengthening the effectiveness of top-down green economy policies.
2. Synergy effect between MSME practices and community networks. Environmentally friendly practices implemented by MSMEs have a synergistic effect on local community networks. MSMEs act as sources of innovation (innovators) that develop sustainable production and distribution models, while communities function as scalers and enablers, helping to expand



impact and build social awareness. This synergy accelerates the diffusion of green innovations at the urban level.

3. The policy gap is real and needs to be bridged. To ensure the sustainability and scalability of green practices, city and provincial governments need to translate green economy strategies into concrete operational support, such as: Access to green finance for MSMEs, training and capacity-building programs, and green procurement preferences for environmentally friendly products. Without applicable derivative policies, the potential for innovation from local actors will struggle to achieve systemic impact.
4. Local context and cultural values play a crucial role (Context matters). Cultural values such as mutual cooperation have been shown to be an enabling backdrop for collective environmental commitment. This culture of cooperation helps build a sense of shared responsibility for environmental preservation. These local cultural nuances provide new theoretical contributions that complement previous literature, which tends to ignore the cultural dimension in green entrepreneurship studies.

Limitations and Directions for Further Research

Qualitative research design is descriptive in nature so it has limitations in generalization of results outside the context of Makassar City.

1. Further research can use a mixed methods approach or comparative design between cities in Indonesia to obtain a broader picture of the dynamics of a locally based green economy.
2. The Local Green Economy Readiness Index (LGERI) used in this study is still heuristic in nature.
3. Further research is recommended to refine the indicator weights through input from stakeholders or using multi-criteria decision-making methods so that the measurement results are more accurate and representative.
4. Longitudinal studies are needed to assess the relationship between initial readiness and long-term green economic transformation.
5. Continuous monitoring will help understand how the initial capacities of MSMEs and local communities develop into stable sustainable practices and have a systemic impact on the urban economy.



CONCLUSION

This study examines how micro, small, and medium enterprises (MSMEs) and community-based entrepreneurship drive the transition to a localized green economy in Makassar City. Through a qualitative descriptive approach supported by thematic coding and the development of the Localized Green Economy Readiness Index (LGERI), this study provides empirical insights into how bottom-up entrepreneurial behavior contributes to sustainable urban growth.

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