

The Role of the Circular Economy in Improving the Sustainability of the Creative Industry in Indonesia

Septien Dwi Savandha

Universidad Tecnológica Latinoamericana en Línea (UTEL), United State American

*e-mail: dwisavandha9@gmail.com

KEYWORDS:

Circular economy, creative industry, sustainability, MSMEs, business innovation.

ABSTRACT

This research aims to analyze the role of the circular economy in improving the sustainability of the creative industry in Indonesia. The background of the research departs from global problems related to high material consumption and waste, as well as the significant contribution of the creative sector to the national Gross Domestic Product (GDP). Although the circular economy concept gains international recognition, its implementation in Indonesia's creative industry remains limited and fragmented. This study uses a qualitative approach with an exploratory case study design. The subjects of the study were 15 business actors in the fashion, crafts, and culinary subsectors in Jakarta, Bandung, Yogyakarta, and Surabaya. Data were collected through in-depth interviews, licensed employee questionnaires, participatory observations, and documentation studies, and were thematically analyzed. The results of the study show that the implementation of the circular economy in the creative sector is more focused on the use of residual materials, the use of recycled materials, and the replacement of environmentally friendly packaging. The main obstacles include cost limitations, lack of market incentives, and low consumer literacy. The findings also confirm variations across subsectors: fashion excels in the use of leftover fabrics, crafts in recycled materials, and culinary in plastic reduction. This study uniquely integrates product lifecycle mapping with business performance metrics, proposes low-cost transition pathways for creative SMEs, and explicitly connects business practices with national policy instruments (Minister of Environment and Forestry Regulation P.75/2019). The implications of this study emphasize the importance of integrating circular principles into business strategies, employee education, and government policy support. This is expected to accelerate the transition to a more competitive, sustainable, and adaptive creative industry to global demands.

INTRODUCTION

The global environmental crisis and resource efficiency demands position the circular economy as a transformative approach to decouple growth from material exploitation. However, the reality at the global level shows inadequate progress: the portion of secondary materials (recycling/recycling) consumed by the world economy has actually fallen from 9.1% (2018) to 7.2%

(2023), signaling a weakening of the degree of "roundness" of the global economy and the urgency of reforming the cross-sectoral consumption production system (Circularity Gap Report, 2024).

Within the climate policy horizon, the shift from a linear "take-make-dispose" model to a circular model is also seen as strategic to reduce emissions sourced from material extraction and processing. The latest policy discourse emphasizes that without comprehensive changes ranging from product design, service-based business models, to recycling infrastructure, recycling alone is not enough to catch up with the pace of global material consumption. This strengthens the argument that the industry, including the creative industry, needs to reorganize its value chain to be more regenerative and inclusive.

In Indonesia, the creative industry holds strategic importance as both a major employment generator and value-added driver. Data from the Ministry of Tourism and Creative Economy (Kemenparekraf) shows that the contribution of tourism to GDP in 2023 will reach around 3.9%, with the added value of the creative economy of IDR 691.75 trillion and exports of creative products of USD 11.82 billion. The creative workforce base is also large and highly concentrated in the three main subsectors of culinary, crafts, and fashion which account for more than 90% of creative workers. This fact marks the great potential as well as the challenge to mainstream circular principles in the material-intensive subsector.

On the other hand, Indonesia faces significant waste management challenges. The National Research and Innovation Agency (BRIN) reported that around 11.3 million tons of waste in Indonesia have not been managed (2024), while the Ministry of Environment and Forestry's SIPSN dashboard shows that in 2024 only around 40% of the "managed" waste, the remaining $\pm 60\%$ have not been adequately handled. This inequality in management magnifies the environmental footprint of economic activities, including the production and consumption of creative products (e.g. textile waste and batik). This situation is in line with the urgency of implementing a roadmap for waste reduction by producers (Extended Producer Responsibility / EPR) as stipulated in the Minister of Environment and Forestry Regulation No. P.75/2019 which targets a 30% reduction in waste generation by producers by 2029.

The relationship between the creative industry and the issue of circularity is especially seen in the dense sub-sectors of fashion, crafts, and textiles materials that are vulnerable to producing process and post-use waste. A number of recent studies confirm the opportunities for improvement through systemic design and circular practices: research on collaborative circular fashion initiatives shows that strengthening design, organizing networks of actors, and material resorption mechanisms can increase usable value while reducing waste; a study on batik MSMEs in Indonesia proves that open innovation and circular economy principles have a positive effect on organizational performance; International studies of craft actors and artisans also map circular (closed-loop) practices that are relevant to local contexts. Overall, this literature provides an empirical basis that circular transformation in the creative sector is not only possible, but also has an impact on business performance.

However, critical research gaps persist. First, many studies in Indonesia focus on one subsector (e.g. batik or fashion) and explore some of the links (e.g., production or design), thus lacking a cross-sub-sector framework that links the design phase of end-of-life consumption distribution production

as a whole. Second, circular performance indicators (material circularity indicator, resource intensity, carbon/water footprint) have not been integrated with business indicators commonly used by creative actors (added value, margin, customer retention). Third, the relationship between circular practices of small and medium enterprises (creative SMEs) and national policies (Minister of Environment and Forestry Regulation P.75/2019, circular economy roadmap, and emission reduction targets) is still rarely mapped operationally, so that incentive opportunities/policy infrastructure are underutilized. This research is designed to bridge these gaps.

The urgency of the research is also strengthened by the national development agenda. A study by Bappenas/LCDI estimates that the implementation of the circular economy can increase GDP by Rp593-638 trillion by 2030, create 4.4 million cumulative jobs, and reduce GHG emissions by ± 126 million tons of CO₂e and water use by billions of cubic meters. Indonesia's roadmap document and circular economy action plan (2024) clarify its long-term transition commitments. For the creative sector that contributes greatly to added value and job absorption, circular mainstreaming has the potential to be a "double lever" to increase competitiveness and reduce environmental burden.

This research offers three distinctive contributions to the field. First, it develops an integrative framework assessing the circular economy's role across Indonesia's creative industry subsectors (fashion, crafts, culinary), mapping product lifecycles from design to end-of-life while linking circular metrics with business performance indicators.

Second, it formulates realistic "transition pathways" for creative SMEs based on low-cost practices repair, redesign, reuse, remanufacture, upcycling tailored to local capacity constraints.

Third, it explicitly integrates business practices with national policy instruments (EPR regulations, material standards, market incentives) to accelerate adoption, moving beyond sectoral studies to provide operational blueprints for stakeholders and policymakers.

The objectives of the research are: (1) to identify and map circular economy practices that are relevant and feasible to be applied to the Indonesian creative industry, especially in the material-intensive subsector; (2) evaluate the impact of such practices on sustainability (economic, environmental, social) performance and business performance (value added, cost efficiency, brand differentiation); (3) assessing the linkages and synergy opportunities between business practices and policies (Minister of Environment and Forestry Regulation P.75/2019, national roadmap for circular economy); and (4) formulate business model and policy recommendations to accelerate the circular transition in the creative sector.

The benefits of the research are expected to be present at three stages. Theoretically, this study enriches the literature on the circular economy in the creative industries of developing countries through a cross-subsector framework and the integration of circular-business metrics. In practical terms, the results provide a gradual guide for creative SMEs to adopt commercially valuable circular practices (e.g. modular design, certified recycled materials, take-back schemes, repair services), while capitalising on value opportunities (green brand equity, material/energy efficiency). In policy, the findings provide a technical basis to strengthen the implementation of EPR, material standardization, and market support (green procurement, certification) in favor of local creatives.

RESEARCH METHOD

Research Design

This study uses a qualitative approach with an exploratory case study design. This design was chosen because it is suitable to explore in depth the phenomenon of the role of the circular economy in improving the sustainability of the creative industry in Indonesia, especially in the context of resource utilization, waste management, and sustainable business model innovation. The qualitative approach allows researchers to understand the perspectives, experiences, and adaptation strategies of creative industry players holistically, not just based on quantitative data. Exploratory case studies also provide flexibility to compare various subsectors of the creative industry (fashion, crafts, culinary, and design) that have different characteristics but are equally relevant to the implementation of circular economy principles.

Location and Research Subject

The research was carried out in several major cities in Indonesia that are known as the growth centers of the creative industry, such as Jakarta, Bandung, Yogyakarta, and Surabaya. The selection of this location was carried out purposively by considering the concentration of creative actors, data accessibility, and the diversity of subsectors.

The research subjects are creative industry business actors representing the fashion, crafts, and culinary subsectors, with the following criteria:

1. It is a micro, small, or medium enterprise (MSME) that operates for at least 3 years.
2. Have or are implementing circular economy practices, such as the use of recycled materials, eco-friendly design, waste management, or reuse/recycle-based business models.
3. Willing to be a research participant and open to interviews and observations.

In addition to business actors, additional informants include related stakeholders, such as government representatives (Kemenparekraf, KLHK), creative industry associations, and circular economy activist communities.

Research Instruments

The main instrument in this study is the researcher himself as a human instrument, according to the characteristics of qualitative research. However, to strengthen data reliability, auxiliary instruments are also prepared in the form of: (1) The interview guidelines are semi-structured, containing a list of open-ended questions related to the understanding, application, barriers, and impacts of circular economy practices; (2) Observation sheets, to record real practices in the field, such as the use of raw materials, waste management, production processes, and interaction with consumers; (3) Supporting documents, including internal business reports, official government publications, reports of creative industry associations, and policy notes related to the circular economy.

Data Collection Techniques

Data is collected through the following techniques: (1) In-depth interview It is carried out with creative business owners or managers, workers, and related stakeholders. Semi-structured interviews were chosen to be flexible in digging into in-depth information, but still focusing on the research theme; (2) Participatory observation The researcher conducted direct observations of business

activities, such as the production process, material sorting, energy use, and recycling practices. This observation aims to capture contextual data and real phenomena that are not always revealed through interviews; (3) Documentation studies Secondary data is obtained through company documents (financial statements, sustainability reports, product brochures), government regulations, institutional research reports, and publications related to circular economy practices in the creative sector.

RESULTS AND DISCUSSION

The respondents of this study consisted of 15 creative industry players representing the fashion, crafts, and culinary subsectors in Jakarta, Bandung, Yogyakarta, and Surabaya. The majority of respondents are micro and small business owners with a business duration of more than 3 years. In terms of business age, 60% have been running between 3-7 years, while the other 40% are over 7 years old. In terms of the number of employees, 8 respondents manage businesses with 5–20 employees, while the other 7 respondents employ more than 20 employees. This characteristic shows that although most of them are still classified as MSMEs, they have a relatively stable production capacity.

Table 1. Characteristics of Research Respondents

Variable	Sum	Percentage
Business Age 3–7 years	9	60%
Business Age > 7 years	6	40%
Number of Employees 5–20	8	53,3%
Number of Employees > 20	7	46,7%
Fashion Sub-sector	6	40%
Craft sub-sector	5	33,3%
Culinary Sub-sector	4	26,7%

This table shows a fairly diverse distribution of respondents and allows for cross-sub-sector comparisons.

Key Findings from the Interview with Management

In-depth interviews with business owners and managers reveal three main themes related to the implementation of the circular economy.

a. Understanding the Concept of Circular Economy

Most management has understood the basic principles of the circular economy such as *reduce*, *reuse*, *recycle*, but its application is still limited. Fashion actors, for example, emphasize the use of leftover fabrics for accessories, while craft actors rely on recycled raw materials such as pallet wood.

b. Implementation Barriers

Management identified cost limitations as the primary obstacle to accessing environmentally friendly technology, compounded by insufficient market incentives. As one of the informants revealed: *"We have started using recycled materials, but consumers often do not want to pay more for environmentally friendly products. Finally, it is difficult for our business to maintain profit margins."* (Interview, Bandung, 2025)

c. Adaptation Strategy

Some actors have begun to develop adaptive strategies, such as collaboration with the recycling community, sustainability-based brand strengthening, and *take-back* programs for products that consumers no longer use.

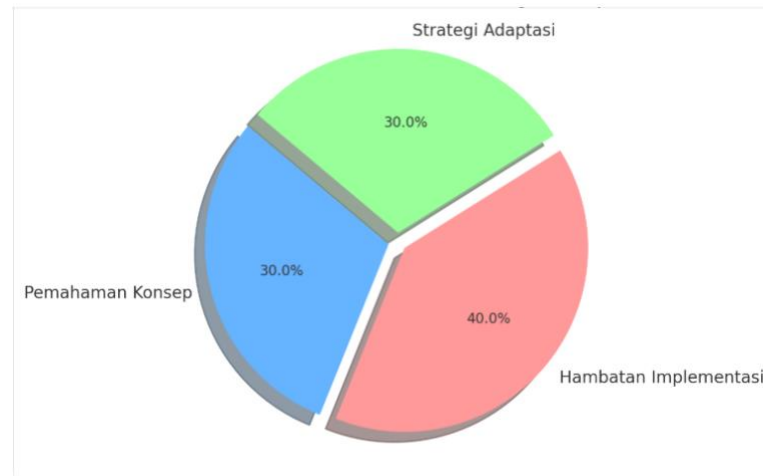


Figure 1. Key Themes of Management Interviews

Findings from the Licensed Employee Questionnaire

A total of 120 employees from 15 respondent companies participated in filling out questionnaires related to the application of circular economy principles in the workplace.

The results show that:

1. 72% of employees feel that their company has implemented waste management principles.
2. 65% consider that companies are innovating recycling-based product designs.
3. Only 40% rated the company as having a formal circular education program for employees.

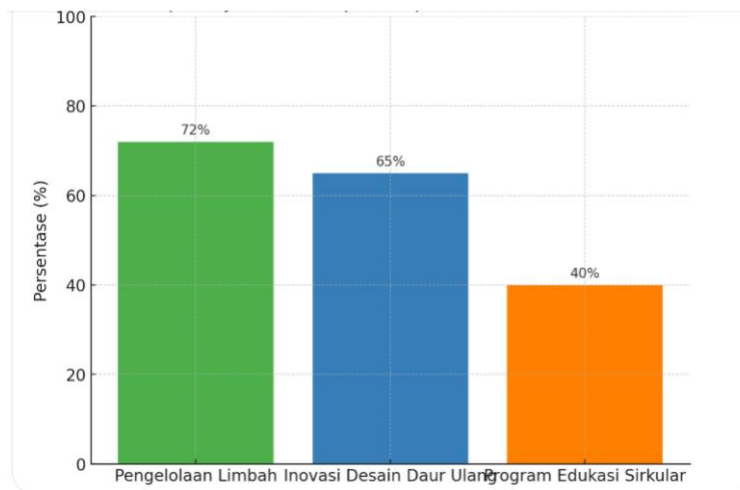


Figure 2. Employee Perception Graph on the Implementation of the Circular Economy in the Creative Industry

Graphical interpretation shows that the company is still more focused on the production aspect, while internal education is relatively neglected.

Observation Results

Field observations reinforced the findings from interviews and questionnaires, revealing consistent patterns across subsectors. In the fashion subsector, small businesses commonly utilize patchwork for accessory products such as small bags and masks, yet a collective textile waste management system is still lacking. In the craft subsector, the use of recycled materials like wood, metal, and plastic is relatively high, but documentation of production processes remains unsystematic. Meanwhile, the culinary subsector emphasizes reducing plastic waste by adopting paper or biodegradable packaging alternatives. However, observations also highlight a gap between sustainability rhetoric and real practices for instance, several businesses promote themselves as “green brands” but continue to rely on single-use plastics in their product distribution.

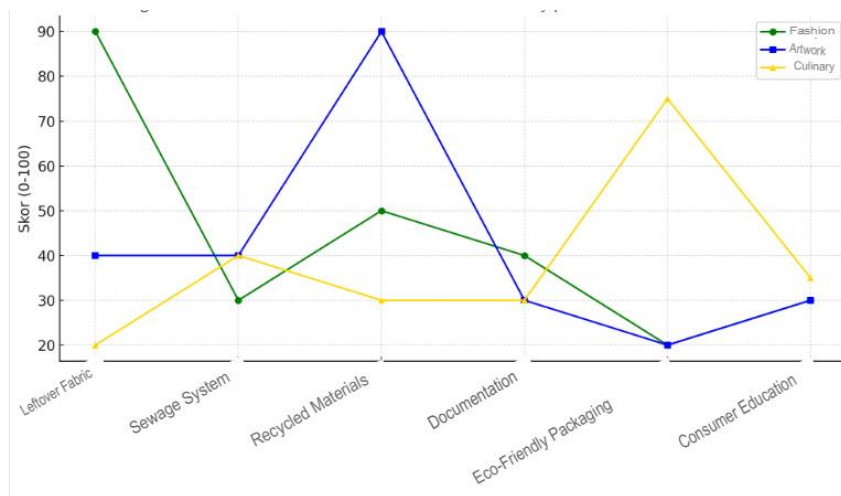


Figure 3. Diagram of Observation Results of Circular Economy Practices in Three Subsectors

Table 2. Summary of Research Findings

Data Source	Key Findings	Implication
Interview	Cost barriers and lack of market incentives	Need policy support and fiscal incentives
Questionnaire	Internal education is still low	Companies need to strengthen employee literacy
Observation	Practices vary across sub-sectors	Adaptive circular business model per sub-sector is needed

Preliminary Analysis

Overall, this study finds that the implementation of the circular economy in Indonesia's creative industry is still partial and not fully integrated. The company emphasizes more on technical aspects (use of recycled materials, waste reduction), but pays less attention to managerial aspects (education, internal policies, certification).

The biggest barriers lie in cost, consumer awareness, and lack of policy support. However, there is a great opportunity because some actors have developed adaptive strategies based on innovation and collaboration.

Interview Data and Interpretation of Interview Results

The results of interviews with creative industry business owners and managers show that there

is an initial awareness of the importance of implementing a circular economy, although a deeper understanding is still limited. The majority of informants stated that the circular economy is understood as limited to the practice of recycling raw materials or reusing production waste. This shows that the concept of circularity has not been fully seen as an overarching transformation in the business value chain.

Interpretation of the data shows that despite basic awareness; implementation practices are still partial. This is in line with the general trend in Indonesia, where the circular economy is more often translated as a waste management activity, rather than as a sustainability-oriented business system. Cost barriers, lack of market incentives, and low consumer literacy are key factors that hinder fundamental change.

One fashion company manager emphasized: "We are aware that sustainability trends are important, but if eco-friendly materials cost more, our consumers will not necessarily want to buy." (Interview, Yogyakarta, 2025). This quote reinforces the finding that external factors, namely consumers' willingness to pay more, greatly affect the sustainability of circular implementation.

From an adaptation perspective, some actors have tried to develop alternative strategies, such as collaboration with the recycling community, take-back programs, or repositioning brands as green brands. These efforts reflect that despite the barriers; transformation opportunities remain open through business model innovation.

Discussion of Questionnaire Results

A questionnaire filled out by 120 employees showed that the majority (72%) thought their company already had waste management, 65% considered there to be recycling-based design innovations, while only 40% stated that the company had an internal education program related to the circular economy.

The interpretation of this data shows that there is a focus on the technical dimension of production, but managerial aspects and human resource capacity are still not paid attention. Companies tend to look at circularity from a material efficiency standpoint, but haven't made it an organizational culture that is instilled through training. The low number in the employee education dimension emphasizes the need to integrate sustainability literacy in human resource development strategies in the creative sector.

This is in line with the literature that emphasizes that circular transformation is not only about technology or raw materials, but also changes in organizational behavior and mindset (Rahmat et al., 2024). If companies do not strengthen employee awareness, then the implementation of the circular economy risks stopping at a symbolic level or simply branding (greenwashing).

Analysis of Observation Results

The results of the observations reinforce the gap between rhetoric and real practice. In the fashion subsector, the utilization of residual fabrics is already high, but there is no collective system for managing textile waste. In the craft subsector, recycled materials such as pallet wood are widely used, but documentation and process reporting are still low. Meanwhile, in the culinary subsector, the use of eco-friendly packaging is quite significant, but consumer education is still limited.

This analysis shows that the implementation of circularity varies across subsectors and is still partial. Fashion emphasizes creativity in leftover materials, crafts focus on ingredient substitution, while culinary focuses on reducing plastic. However, there is no integration across the product lifecycle phases (design–production–consumption–post-use).

In addition, observations also found contradictions between claims and practices. Some businesses promote themselves as eco-friendly brands but still use single-use plastics in distribution. This indicates that without strict regulations or audit mechanisms, sustainability claims are difficult to validate objectively.

Comparison with Previous Research

The results of this study show several similarities and differences with previous studies. Handayani (2024) found that the success of circular fashion is highly dependent on systemic design and collaboration of actor's networks. These findings are in line with the results of interviews that show that fashion actors in Indonesia are still limited to the use of leftover fabrics, without a systemic framework across the value chain.

Practical Implications

The findings of this study bring a number of practical implications for business actors, policymakers, and academics: (1) For business actors it is necessary to strengthen employee literacy through sustainability training so that circular practices do not stop at the technical stage. Internal education will create an organizational culture that is more adaptive to environmentally friendly innovations; (2) For policymakers these results reinforce the importance of incentive policies, such as tax reductions or subsidies for businesses that adopt environmentally friendly raw materials. In addition, producer waste reduction (EPR) regulations need to be implemented more strictly; (3) For academics and researchers this study opens up space to develop hybrid indicators that combine sustainability metrics (circularity indicators, carbon footprint) with business performance indicators (added value, consumer loyalty).

Theoretical Contributions Beyond National Context

While grounded in Indonesian cases, this study advances circular economy theory in three ways applicable to developing economies globally. First, it demonstrates how resource-constrained SMEs prioritize low-capital interventions (material reuse, design adaptation) over technology-intensive solutions, challenging the assumption that circularity requires advanced infrastructure. Second, it reveals that subsector-specific circular pathways emerge from material characteristics and cultural practices, suggesting that one-size-fits-all circular models may be ineffective in heterogeneous creative industries. Third, by linking micro-level business practices with meso-level policy frameworks (EPR regulations), the study contributes to institutional theory on circular transitions, showing how regulatory alignment can either enable or constrain grassroots innovation. These insights extend beyond Indonesia to inform circular economy strategies in other emerging markets with similar structural constraints.

More broadly, this implication confirms that the sustainability of the creative industry is not only about efficiency, but also the repositioning of business strategies in the midst of global demands for green standard products.

Research Limitations

Like qualitative research in general, this research has some limitations. First, the number of respondents is limited to 15 business actors in four major cities, so generalization to the entire Indonesian creative industry must be done carefully. Second, this study has not used measurable quantitative indicators such as the Material Circularity Indicator (MCI) or carbon footprint calculation, so the analysis is more descriptive. Third, the questionnaire data only includes employee perceptions, not yet equipped with an independent audit that can objectively validate circular practices. These limitations provide room for further research. Subsequent studies can integrate quantitative methods, expand the scope of the sample to rural areas, and build a more comprehensive indicator framework to assess the sustainability of the creative industries.

Overall, the results of the study confirm that the implementation of the circular economy in Indonesia's creative industry is still partial, with variations between subsectors. The biggest barriers lie in cost, lack of incentives, and consumer awareness. However, emerging adaptive strategies such as recycled design innovation, community collaboration, and green brand repositioning show that transformation towards sustainability is not impossible.

CONCLUSION

This study found that the implementation of the circular economy in Indonesia's creative industry is still early and partial. Most businesses apply basic principles like reduce, reuse, and recycle only at the technical level such as using leftover materials or eco-friendly packaging without full integration into their value chain. Key barriers include costs, low consumer awareness, and limited policy support. Some actors, however, have begun adopting adaptive strategies through design innovation, collaboration with recycling communities, and sustainability-based branding. While fashion excels in fabric reuse, crafts in recycled materials, and culinary in reducing plastic, gaps remain between claims and real practices. Overall, the industry still lags in documentation and standardization, but with stronger synergy among business, government, and community, the circular economy could significantly enhance creative industry sustainability in Indonesia.

BIBLIOGRAPHY

- Amri, A. (2022). The Role of the Creative Economy in Improving Local Competitiveness: Case Study of Creative Cities in Indonesia. *ProBusiness: Journal of Management*, 13(2), 183–193. doi:no doi. aijbm.comejournal.joninstitute.org
- Rahmat, D. A., Rumanti, A. A., Pulungan, M. A., Rizaldi, A. S., & Amelia, M. (2024). Evaluating the Role of Open Innovation and Circular Economy in Enhancing Organizational Performance: Insights from Batik Small and Medium Enterprises in Banyuwangi, Indonesia. *Sustainability*, 16(24), section 11194. <https://doi.org/10.3390/su162411194> MDPI
- Nindiya, T. M. (2025). Enhancing circular economy capability in Indonesian ... *EcoProfit Journal*, Vol(issue), pp. doi:no doi. ScienceDirect+3Institute for Advanced Science+3Wikipedia+3

- Septina, F. (2021). Indonesia's Sustainability Economy: Creative Industry Perspective. *AIJBM (Asian Journal of Business and Management)*, Vol(issue), pages. Retrieved from [AIJBM website ResearchGate+1](#)
- Siregar, M. (2023). Application of circular economy in manufacturing industry ... *AJCD Journal*, Vol(issue), pp. doi:no doi. [Wikipedia+6AMCA Journal+6circulareconomyjournal.org+6](#)
- Study on Monitoring Indonesia's Circular Economy: An Indicator System Proposal. (2024). *Circular Economy Journal*, Vol(issue), pp. doi:no doi. [circulareconomyjournal.org](#)
- Ogiemwonyi, O. (2025). A conceptual review of circular economy position from ... *Science of the Total Environment (or relevant journal)*, Vol(issue), pages. doi:no doi. [ScienceDirect](#)
- Birgi, J. (2024, November). The role of spatial structures and social values in shaping local productive systems New lessons from the woodfurniture cluster of Jepara, Indonesia. *ArXiv Preprint*. Retrieved from [arxiv.org arXiv](#)
- Kurniawan, A., & Sunitiyoso, Y. (2024). New Business Model for Sustainable Retail Company Using Design Thinking Concept. *ArXiv Preprint*. Retrieved from [arxiv.org arXiv](#)
- Nababan, T. S., & Purba, E. F. (2023). Labour Absorption In Manufacturing Industry In Indonesia: Anomalous and Regressive Phenomena. *ArXiv Preprint*. Retrieved from [arxiv.org arXiv](#)
- Sonobe, T. (2022). Creative Economy 2030: Imagining and Delivering a Robust, Creative, Inclusive, and Sustainable Recovery. *ADB Publications*. Retrieved from [ADB website adb.org+1](#)
- Rethinking the Growth of Creative Economy in Indonesia. (2023). *ERIA Report*, Chapter 1. Retrieved from [ERIA website eria.org+1](#)
- Sihol, N., et al. (2017). Designing the Business Models for Circular Economy Towards the Conceptual Framework. *Sustainability*, 9(1), Article xxx. <https://doi.org/10.3390/su9010001> [Wikipedia](#)
- Murray, A., Skene, K., & Haynes, K. (2017). The circular economy: An interdisciplinary exploration. *Journal of Business Ethics*, 140, 369–380. <https://doi.org/10.1007/s1055101526932> [Wikipedia](#)
- Kirchherr, J., Reike, D., & Hekkert, M. (2017). Conceptualizing the circular economy: An analysis of 114 definitions. *Resources, Conservation and Recycling*, 127, 221–232. <https://doi.org/10.1016/j.resconrec.2017.09.005>.



licensed under a

Creative Commons Attribution-ShareAlike 4.0 International License