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# Strategies for Improving Financial Literacy as a Drive of the Circular Economy for Artisans in Industrial Centers

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## Abstract

Decision making in financial management by individuals and groups in running a business plays a very important role. This is because financial decision-making can provide an overview of the costs and benefits of product recycling practices. From a circular economy perspective, initial investments made in running a business can improve financial literacy through sustainable budgeting, calculating return on investment, and seeking green funding. This research aims to identify the strategies employed by artisans to enhance their financial management decision-making abilities within their circular economy practices. This study uses a qualitative method with a grounded theory approach. The research was conducted in industrial centers concentrated in East Java. Data analysis used open coding, axial coding, and selective coding. The results show that the artisans' understanding of financial literacy in industrial centers, as indicated by their financial knowledge, financial attitude, and financial behavior, is minimal. This can be seen from the information obtained during in-depth interviews, where their understanding was found to be superficial. Another finding regarding the production process, which reflects the artisans' circular economy practices in industrial centers, indicates that they no longer use the "take-make-dispose" principle. Instead, they are at the stage of extending product life by increasing product value using waste-based raw materials. Furthermore, the research on increasing financial literacy among artisans in industrial centers shows that it is being done through integrated training with product marketing, overseen by e-commerce platforms. It is hoped that this research can serve as a reference for future studies related to the welfare of artisans in industrial centers.

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## Keywords

Financial Literacy, Circular Economy, SMEs

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## INTRODUCTION

Financial literacy for artisans in industrial centers is crucial for the sustainability of small and medium-sized enterprises (Zhang et al., 2025). The goal of financial literacy for artisan families is to enable them to manage their finances wisely and achieve their desired objectives. Prudence in managing debt and avoiding excessive debt traps is essential for the continuity of artisan businesses (Agarwal et al., 2025). Artisans need to be able to identify and choose safe and profitable investment types, as well as understand the risks associated with those investments. Financial literacy is necessary for SMEs to grasp the basic concepts of financial products, implement better financial planning and management, and protect themselves from fraud and unhealthy practices in the financial market (Gremi et al., 2025). To secure capital support from banks, SMEs must have simple financial reports that can be used to measure their profits/losses. To increase the profitability of their businesses, artisans can cut production and distribution costs. Artisans who apply the 3R Principles (reuse, reduce, recycle) in product manufacturing can maximize profits from the added value gained through waste processing (Dahiya, 2018). Artisans who implement the 3R principles can drive the circular economy. This is evident in a production and consumption model that involves sharing, leasing, reusing, repairing, refurbishing, and recycling existing materials and products for as long as possible, thereby extending the product's life cycle (Broman & Robert, 2017).

The relationship between the circular economy and financial literacy is very close and mutually supportive. The circular economy aims to minimize waste and maximize resource utilization, while financial literacy can be seen as an individual's or organization's ability to manage and make wise financial decisions (Roorda, 2020). Several studies supporting the link between the circular economy and financial literacy show that the availability of funds, the quality of a company's financial resources, and public subsidies have a positive effect on stimulating the implementation of circular economy initiatives in businesses (Pandey et al., 2024). The purpose of this research is to examine how strategies for improving financial literacy can drive the circular economy implemented by SMEs in industrial centers. This is necessary because survey results indicate that Indonesian citizens are accustomed to digital money and making payments with mobile phones. The development of financial literacy with a digital platform approach presents both potential and challenges in improving the welfare of SMEs.

## LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Financial literacy refers to a series of activities aimed at acquiring and enhancing knowledge, skills, and confidence for consumers, customers, and people in general. This enables them to manage their finances better and more optimally (Azuka et al., 2025). Another perspective on the vision of financial literacy, according to the Financial Services Authority (Otoritas Jasa Keuangan), is an effort to create an Indonesian society with a high level of financial literacy. It is hoped that society will be able to choose, utilize, and use financial products and services to achieve and foster their welfare (Álvarez-Espino et al., 2024). Crucial aspects of financial literacy include:

1. Financial Knowledge

Financial knowledge, as an aspect of financial literacy, involves understanding financial terminology, such as interest rates, credit cards, bankruptcy, stocks, various banking services, and financial sources obtained from various ventures (Mpaata et al., 2025). This knowledge serves as a reference for conducting financial transactions.

2. Financial Attitude

Financial attitude, as an aspect of financial literacy, refers to the degree of interest in efforts to improve information or insights in the financial field (Gremi et al., 2025).

3. Financial Behavior

Financial behavior is an aspect of financial literacy characterized by an orientation towards spending and saving. It can also be defined as the effort to record and store personal and business financial records over a certain period (Bernatska et al., 2025). Financial record-keeping is vital for planning debt and credit financing accurately and appropriately according to the business's cash flow.

### *Circular Economy*

The circular economy is an economic model that involves all products and materials designed to be reused, remanufactured, recycled, or recovered, and maintained within economic activities for as long as possible (Ramirez-Corredores et al., 2023). Another definition of the circular economy, according to The Ellen MacArthur Foundation, is a framework that systematically generates solutions to address global challenges, such as climate change, biodiversity loss, waste, and pollution (Dahiya, 2018). This framework has principles that are all guided by design: eliminating waste and pollution, circulating products and materials at their highest value, and regenerating nature. The key points emphasized in the circular economy are: it's an economic model, it aims to keep materials in the production cycle for as long as possible, it saves natural resources and focuses on renewable natural resources, and it reduces waste and greenhouse gas (GHG) (Cosma & Rimo, 2023).

## METHODS

The research method used in this study is qualitative research with grounded theory (Mackiewicz, 2018). grounded theory is a type of study about stories, developed by listening to other people's accounts through direct meetings and interviews regarding their experiences. This narrative qualitative approach was chosen because the data obtained in the field consists

of words from interview transcripts. This research was conducted at handicraft industry centers located in East Java. The data collection techniques employed in this study were observation, participant observation, in-depth interviews, and documentation. Observation involved observing the activities of research subjects by recording the business activities of the entrepreneurs. Participant observation was carried out by gathering information from participants while observing their business processes. The interview process in this study utilized a snowball sampling technique. Documentation involved accurate data collection. Data analysis in this research followed a process of searching for and arranging the data obtained from the research subjects. The collected data was then compiled, reduced, presented, and concluded. The following is an illustration of the analysis used in this study.

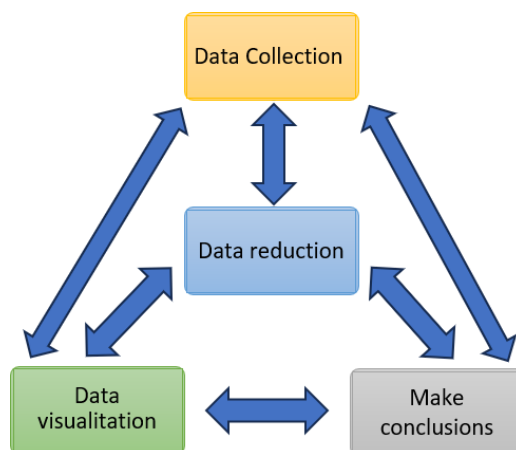


Figure 1. Research Data Analysis

The stages of research data analysis are:

1. Summarizing Data  
This stage involves summarizing the interview data obtained, followed by selecting the core and important points. Data deemed unimportant or irrelevant can be discarded.
2. Coding Data  
The coding stage involves assigning codes to each piece of information obtained from the informants, based on the research focus.
3. Tracing Themes  
Tracing themes in the interviews means tabulating the interview results according to the sub-themes raised in this study.
4. Creating Clusters  
The clustering stage involves arranging the information obtained from informants in a structured manner based on the established framework of thought.

## HYPOTHESES DEVELOPMENT

- R1 : How is the understanding of financial literacy among SME actors in industrial centers?  
R2 : Does the production process reflect a circular economy?  
R3 : What are the strategies for increasing financial literacy among SMEs?

## RESULTS AND DISCUSSION

### Artisans' Understanding of Financial Literacy in Industrial Centers

The interview results with artisans in industrial centers regarding their understanding of financial literacy show that it is primarily related to their grasp of the financial system. For these artisans, understanding the financial system largely means knowing the process of obtaining credit loans from easily accessible financial sources like banks.

*"Usually, we borrow money from the bank. For loans, we typically get KUR (Kredit Usaha Rakyat - People's Business Credit) from BRI. That's because the interest is low. When*

*KUR becomes available, people usually quickly apply for it. But, as you know, the amount is limited." (W.01.001)*

The interview excerpt above shows that artisans' understanding of financial products is limited to bank credit. Other financial products do not receive much attention. To support their business turnover, artisans take out business loans from financial institutions perceived as trustworthy by the community.

The limited nominal amounts offered by financial institutions become one of the obstacles in obtaining credit from banks. The limits provided by these financial institutions are only around one million to twenty million Rupiah. Larger amounts will be granted by the financial institution if there is an asset to be collateralized. For artisans who only have income from their businesses, it feels difficult to secure loans from financial institutions. The following is a breakdown of financial literacy understanding among artisans in industrial centers.

**Table 1. Types of Financial Literacy Among Artisans**

No	Understanding Financial Literacy	Understand	Don't Understand	Information
1	Financial knowledge	✓		Understanding is limited to the amount of credit provided by banking institutions
2	Understanding interest rates	✓		Understanding the interest rate level is only limited to the amount of the loan given by the banking institution.
3	Use of credit cards		✓	Do not use credit cards
4	Investment in stocks		✓	Not investing in stocks due to high risk
5	Other financial services	✓		The financial service used is leasing for vehicle purchases and other items
6	Financial Attitude	✓		Making financial decisions according to situation and conditions
7	Budgeting	✓		Able to create a simple budget to support business operations
8	Controlling expenses	✓		Expenses are made according to current conditions and surrounding costs
9	Financial Behavior	✓		Saving through an arisan
10	Investment	✓		Investment understanding revolves around saving profits for capital turnover.
11	Types of investment		✓	The types of investment understood revolve

around purchasing  
livestock, fixed assets,  
and gold.

From the table above, it can be seen that the financial literacy perception of the artisans is limited to a basic understanding of fulfilling daily life needs. Limited knowledge of information sources and access becomes a major obstacle in making investments. The fear of losing accumulated money makes them hesitant. One of the obstacles to stock investment is invalid information, which becomes a factor in creating a sense of fear in investing. Below is one of the efforts made by artisans in keeping simple financial records as proof of their financial literacy.

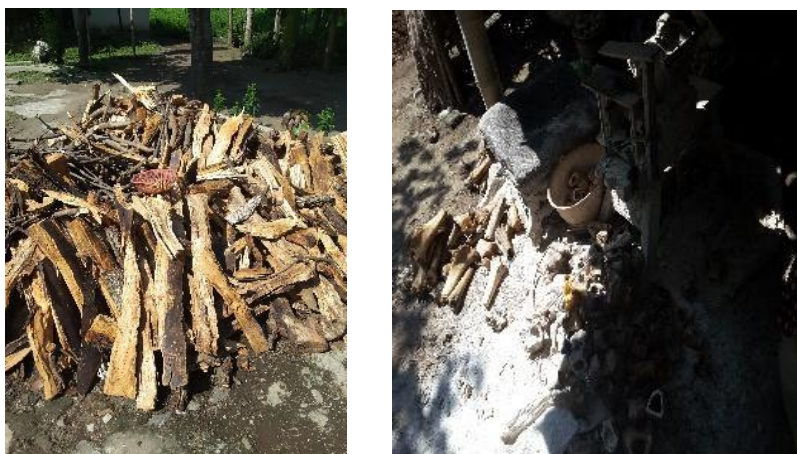
Gambar 2. Recording a basic pricelist

#### *Production Process Reflecting Circular Economy Among Artisans in Industrial Centers*

The craft production process by artisans in industrial centers reflects a circular economy. This is evident in the use of resources or raw materials for crafting. The chosen raw materials are coffee wood waste and animal bones. Below is an excerpt from an interview with one of the artisans.

*"We use raw materials from discarded waste. We usually get them from vendors we have a long-standing relationship with. Cattle bone waste is sourced from meatball sellers." (W.03.001)"*

From the interview excerpt above, it can be concluded that the craftsmen collaborate with other traders to obtain raw materials. Waste generated by these traders will be collected by the craftsmen as a key raw material for their craft production. This reflects a circular economy process, an economic model where all products and materials are designed to be reused, remanufactured, recycled, or recovered, and kept within the economic cycle for as long as possible. Below is an image of the materials used in the production process. From the interview excerpt above, it can be concluded that the craftsmen collaborate with other traders to obtain raw materials. Waste generated by these traders will be collected by the craftsmen as a key raw material for their craft production. This reflects a circular economy process, an economic model where all products and materials are designed to be reused, remanufactured, recycled, or recovered, and kept within the economic cycle for as long as possible. Below is an image of the materials used in the production process.



*Figure 3. Raw materials or resources used in the circular economic model*

From the image above, it can be seen that one of the raw materials in the circular economy model involves using new renewable materials, recycled materials, empowered waste, and redesigned raw materials. Data obtained from the field shows that food waste used as raw material falls into the category of renewable materials, and coffee wood waste used as raw material is also considered a renewable material. The linear economic model, which is often used, is typically thought to maximize output and profit. However, this linear model is unsustainable in the long term because it follows a "take-make-dispose" approach. In contrast, the circular economy model aims to extend a product's lifespan. The materials produced from these raw materials are as follows:



*Figure 4. Image of products resulting from the circular economy model*

From the image above, it can be concluded that products made from renewable materials have high value. These craft products are even exported to other countries, specifically Japan. This is because the Japanese consumer segment prefers products made from wood.

*Increased Financial Literacy Among Artisans in Industrial Centers*

Financial literacy strategies implemented in industrial centers involve providing training to enhance non-formal education. The training sessions attended by artisans include the use of financial applications, online platforms, and simulations to make financial literacy learning more interactive and engaging. The abundance of online applications also supports the development of artisans' knowledge in improving their financial literacy. One such example is the start-up company Bukalapak, which provides education through promotional activities for its products and services. Below is one form of e-commerce application promotion that supports financial literacy in industrial centers



Figure 5. One form of financial literacy strategy

## CONCLUSION

Understanding financial literacy among artisans in the craft industrial center is generally minimal. Knowledge of financial concepts, financial sources, and financial behavior is understood by the artisans primarily as a way to manage capital turnover in their businesses. The limited loan amounts provided to artisans when applying for credit also hinder their business operations. However, the production process carried out by these artisans already reflects a circular economy model, demonstrating environmental sustainability. This is evident in their choice of raw materials, such as food waste and plant waste. In this context, the circular economy model aims to extend a product's lifespan. The strategy for increasing financial literacy among artisans in the industrial center involves providing training. This training is offered by an e-commerce platform as part of its product introduction efforts

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