



## BUSINESS ADMINISTRATION STRATEGY, GREEN HUMAN CAPITAL, AND FINANCIAL ENTREPRENEURSHIP AS DRIVERS OF THE CIRCULAR BUSINESS MODEL

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### ABSTRACT

**Phenomenon/Issue** The growing global awareness of economic and environmental sustainability demands a transformation from linear business models to circular business models. However, at the local level such as in Malang City the implementation of this concept remains limited due to weak business administration systems, low green human capital competencies, and limited access to sustainable financing.

**Purpose:** This study aims to analyze how business administration strategies, green human capital, and financial entrepreneurship function as key drivers of the circular business model in Malang City.

**Novelty:** The novelty of this research lies in the integration of these three factors into a single conceptual framework that explains the dynamics of building a sustainable business ecosystem within the context of urban MSMEs.

**Research Methods:** This study employs a qualitative approach through in-depth interviews with MSME actors, government officials, and financial institutions.

**Results:** The findings indicate that the synergy between administrative efficiency, green human capital competencies, and financial innovation can strengthen circular business practices.

**Research Contributions:** This research contributes by proposing the “Integrative Circular Business Drivers” conceptual model, which broadens the theoretical perspective on sustainability and provides strategic direction for strengthening the green economy at the local level.

## INTRODUCTION

In recent decades, the world has faced serious challenges related to environmental sustainability due to the dominance of principled linear business models *take–make–dispose* (Kayikci et al., 2022; Rizos & Bryhn, 2022). This pattern leads to overexploitation of natural resources and an increase in the volume of global waste. Report *UNEP Global Waste Management Outlook 2024* noted that municipal solid waste production reached 2.3 billion tons in 2023 and is projected to rise to 3.8 billion tons by 2050, with potential economic losses of up to USD 640 billion per year. In response, the concept of a circular business model is rapidly developing at the global level through the principle of *reduce, reuse, recycle*, and *Regenerate* to create resource efficiency and sustainable economic value (Oliveira et al., 2024; Perramon et al., 2024).

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Bhatti et al., (2024) states that countries such as the Netherlands and Germany are pioneers with national circular economy policies; The Netherlands even recorded the highest rate of use of circular materials in the European Union, which was 27.5% in 2022. The implementation of a circular business model is also in line with the SDGs, especially points 8, 9, and 12 which emphasize sustainable economic growth, industrial innovation, and responsible consumption and production (Bhatti et al., 2023; Dey et al., 2022; Rodríguez-Espíndola et al., 2022). Thus, the shift towards a circular economy is an important global strategy to balance economic growth, environmental sustainability, and social well-being (Dolci et al., 2024; Takacs et al., 2022).

In Indonesia, the application of the circular business concept is starting to grow in line with the government's push for a green economy and sustainability. Through the policies of the Ministry of Environment and Forestry (MoEF) and the Ministry of Cooperatives and SMEs, the government seeks to encourage the transition to a national circular economy to support the target of *Net Zero Emission* Year 2060 (González-Moreno et al., 2024; Knäble et al., 2022). Indonesia's circular economy potential is estimated to reach Rp 638 trillion per year by 2030, with the ability to create more than 4.4 million new green jobs (Bappenas, 2023). However, implementation at the level of business actors, especially MSMEs, still faces major challenges such as limited knowledge, access to green financing, and weak innovation in business management. As a result, most economic activities are still oriented towards short-term efficiency without regard to environmental impact (Hernandez Marquina et al., 2024). This condition shows the importance of an adaptive business administration strategy, strengthening green human capital, and developing financial entrepreneurship to encourage the transformation towards a circular business model in Indonesia (Breier et al., 2021).

Malang City is one of the centers of economic growth and education in East Java which has a rapidly growing ecosystem of MSMEs and creative startups. The city has great potential to apply circular business principles, especially in the culinary, fashion, and handicraft sectors (Khan et al., 2025; Suhardono et al., 2025). However, according to data from the Malang City Cooperatives, Industry, and Trade Office (2023), most business actors are still running a linear business model with a high level of production waste and minimal recycling efforts. In addition, awareness of eco-friendly practices and efficient resource management is still low. The quality of green human capital is also not optimal due to a lack of training, managerial innovation, and an organizational culture that supports sustainability (AlQershi et al., 2023; Meng et al., 2023). In terms of financing, access to green capital and environmentally oriented financial innovation is also limited. This condition emphasizes the need for innovative business administration strategies, strengthening green human capital, and financial entrepreneurial support as the main drivers of the implementation of a circular business model in Malang City (Huy & Phuc, 2024; Nikam & Melati, 2023).

Ideally, business actors in Malang City are expected to be able to implement a sustainable business model with a business administration strategy that is adaptive, efficient, and responsive to environmental challenges. The strategy includes the organization's ability to manage governance, operations, and managerial innovation to support environmentally friendly business practices and efficient use of resources (Onubi et al., 2024; Yong et al., 2023). Within the framework of dynamic capabilities theory, business administration strategies play an important role in *Sensing, seizing and Reconfiguring* opportunities towards circular transformation. However, the success of this strategy is highly dependent on the quality of green human capital, namely the knowledge, skills, and environmental values possessed by human resources. Green human capital acts as a catalyst in creating green innovations, improving energy efficiency, and encouraging sustainability-oriented organizational behavior (Asghar et al., 2023; Özgül, 2025). Recent research shows that the development of green human capital has a positive correlation with the sustainability performance and green innovation of companies (Afzal et al., 2024; Agyabeng-Mensah & Tang, 2021), because employees who have a high environmental awareness are better able to create creative solutions to reduce the ecological impact of production.

In addition to the human factor, the financial entrepreneurial dimension is also an important element in supporting a circular business model. This concept emphasizes the ability of business actors to access and utilize sustainable financing sources such as *Green Bonds*, *Sustainable Finance*, and schema *Blended Finance* (Gajanayake et al., 2024; Zhaksybayeva et al., 2024). The Government of Indonesia through the Financial Services Authority (OJK) has launched the Indonesian Sustainable Finance Taxonomy (TKBI) 2024 and strengthened regulations through POJK No. 18/2023, which aims to encourage financial institutions to provide financing for environmentally friendly projects. However, at the level of micro, small, and medium enterprises (MSMEs), access to green funding is still low due to limited managerial capacity, financial literacy, and lack of innovation in asset and capital management. According to the report of Bappenas (2023) and the World Bank (2024), the financing gap (*Financing Gap*) for MSMEs in Indonesia reaches more than Rp 1,000 trillion, which is the main obstacle to the transformation towards a green economy.

In the context of Malang City, these challenges are very real. Based on data from the Malang City Cooperatives, Industry, and Trade Office (2023), more than 80% of MSME actors still use a linear business model that is oriented towards increasing production without paying attention to aspects of resource efficiency or waste management. Most business actors do not have an adequate understanding of circular business practices and still place the environmental aspect as a cost burden, rather than a new economic value opportunity. In terms of human resources, green competency training and certification are still limited, while in terms of finance, most MSMEs have not been able to access green financing due to limited collateral assets and administrative capacity. This creates a gap between ideal expectations for the implementation of circular business models and the reality in the field that is still far from sustainable practices (Badwy et al., 2025; Tjahjadi et al., 2023).

Therefore, synergy between efficient business administration strategies, strengthening green human capital, and financial innovation based on sustainable entrepreneurship (financial entrepreneurship) is needed to bridge this gap (Amelia Setyawati, Iradah Rahman, et al., 2023; Setyawati, Nyuherno Aris Wibowo, et al., 2023). This strategy can be realized through increasing green managerial capacity, strengthening the culture of environmentally oriented organizations, and expanding access to green financing at the regional level (Onubi et al., 2024; Yong et al., 2023). With this step, Malang City has the potential to become a model green business city in Indonesia, while strengthening its contribution to the achievement of the Sustainable Development Goals (SDGs), especially point 8 on decent work and economic growth, point 9 on innovation and infrastructure, and point 12 on responsible consumption and production (Asghar et al., 2023; Özgül, 2025).

In facing the gap between ideal conditions and the reality on the ground, an integrated and contextual strategy is needed to strengthen the foundation of the implementation of a circular business model in Malang City. The strategy must be able to combine three main dimensions, namely business administration, green human capital, and financial entrepreneurship. From a business administration perspective, organizations need to build governance systems that are efficient and adaptive to external environmental changes, such as government policies, green market trends, and social pressures on environmentally friendly practices. This strategy can be realized through the digitization of administration, sustainable supply chain management, and the application of principles *Green Governance* which emphasizes transparency and accountability in every business process (Afzal et al., 2024; Agyabeng-Mensah & Tang, 2021).

Furthermore, strengthening green human capital must be carried out in a sustainable manner through education, training, and organizational culture transformation. The development of green competencies includes not only technical abilities in energy efficiency or waste management, but also cognitive and affective abilities to understand the relationship between business activities and their ecological impact. Training, certification, and collaboration programs with higher education institutions can be a strategic means to strengthen green human capital in Malang City (Amelia Setyawati, Amelia Suggangga, et al., 2023; Rahma et al., 2022; Setyawati, Feni Azadilah, et al., 2023; Setyawati, Sugangga, et al., 2023). Meanwhile, the financial entrepreneurial dimension needs to be directed at increasing the capacity of

business actors in accessing and managing sustainable financing. Collaboration between MSME actors, financial institutions, and local governments can encourage the formation of a local green funding ecosystem, for example through *Green Microfinance*, *Crowdfunding* environment-based, or tax incentive schemes for circular business actors (Muzamwese et al., 2024; Nikam & Melati, 2023).

However, from an academic perspective, there is still a research gap that needs to be bridged. Studies on the circular business model in Indonesia have so far focused more on aspects of environmentally friendly technology, waste management, or public policy, while the integration between business administration strategies, green human capital, and financial entrepreneurship as a driver of the circular business model is still very limited. Most previous studies (e.g. in European or large manufacturing contexts) have not highlighted how these three factors can interact synergistically in the context of urban MSMEs in developing countries, particularly in Indonesia. In addition, there is still little research that places local contexts such as Malang City as empirical case studies, even though this region has creative economy characteristics and high potential to develop green business practices. This gap is an important basis for this research to make a scientific and practical contribution.

In terms of novelty, this research offers a conceptual and empirical approach that integrates the three strategic factors of business administration, green human capital, and financial entrepreneurship in one theoretical framework that acts as the main driver of circular business models at the local level. This approach expands the perspective of sustainable management that has been more focused on environmental or technological factors, by adding human and financial dimensions as components of strengthening the circular transition. Thus, this study not only explains the relationship between variables, but also builds an integrative strategy model that can be applied by business actors in the region to realize sustainable business practices.

The urgency of this research is even stronger considering the global demand for the implementation of a green economy and the Net Zero Emission 2060 target launched by the Indonesian government. The transition to a circular economy is no longer an option, but a necessity so that cities like Malang are able to survive in the modern economic competition that increasingly emphasizes sustainability and resource efficiency. In this context, the results of the research are expected to not only be scientific contributions, but also the basis for the formulation of local policies that support business actors in transforming towards a sustainable business model.

## LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

The Circular Business Model (CBM) is an economic approach that emphasizes reuse, reduce, recycle, and regenerate resources throughout the product life cycle (Huy & Phuc, 2024; Megawati et al., 2024). CBM aims to create sustainable economic value by minimizing waste and ecological impact (Gajanayake et al., 2024; Pham & Vu, 2024). In the Indonesian context, the implementation of CBM is an important strategy to support the achievement of Sustainable Development Goals (SDGs), especially point 8 (decent economic growth), point 9 (industrial innovation), and point 12 (responsible production). The implementation of a circular business model requires strong support from the organizational dimension, human resources, and an adaptive financial system. Therefore, the concept of business administration strategy, green human capital, and financial entrepreneurship is a fundamental factor in the success of CBM at the corporate and regional levels. In this study, the indicators Circular business models include: (1) Product design that is easy to recycle or reuse, (2) Innovation in design to extend product life (3) Use of environmentally friendly raw materials (4) Energy optimization and waste reduction.

Business administration strategy refers to an organization's ability to efficiently manage resources, structures, and managerial processes to achieve long-term goals (Istianingsih & Latief, 2021). In the context of sustainable business, an effective business administration strategy includes data-driven planning, process digitization, and the application of green governance principles (*Green Governance*). Research by Zulva & Ali, (2025) It shows that organizations with innovative administrative strategies

are more adaptive to environmental changes and are faster to adopt circular business models. In this study, the indicators Business administration strategies include: (1) Integration of circularity principles in business planning, (2) Adaptability to changes in the business environment, (3) Use of digital technology for process efficiency, (4) Continuous evaluation of business performance (Kusuma et al., 2025).

Green Human Capital (GHC) is a form of human capital that is oriented towards sustainability values, encompassing knowledge, skills, and attitudes that support environmentally friendly practices (Boonsuwan, 2023; Ibrahim, 2023). GHC acts as a catalyst in creating green innovations, optimizing resource liabilities, and improving the company's sustainability performance. The study of Tang et al. (2022) confirms that organizations with high GHC levels tend to be more successful in implementing CBM because employees have ecological awareness and pro-environmental behavior. In addition, green training and sustainable organizational culture have also been shown to increase employee loyalty and productivity. In this study, the indicators *Green Human Capital* These include: (1) Understanding of environmental issues and the circular economy, (2) Ability to recognize the environmental impact of business activities, (3) Technical ability in energy efficiency and waste management, (4) Ability to innovate in environmentally friendly practices, (5) Company support in green training.

The concept of financial entrepreneurial refers to the ability of business actors to manage and utilize financing sources creatively and innovatively to support sustainable growth (Malik et al., 2024). In the context of green business, these capabilities include access to green finance, *Impact Investment* and *Sustainable funding* relevant to circular economy activities. Research by (Hermansson et al., 2022; Hermansson & Jonsson, 2021). shows that green financial literacy and sustainable finance innovation contribute significantly to the implementation of CBM in the MSME sector. However, in a local context such as Indonesia, business actors still face major obstacles in accessing green financing due to limited assets, guarantees, and financial literacy (World Bank, 2024). Therefore, financial entrepreneurship skills are an important element in encouraging circular transformation at the regional level. In this study, the indicators *Financial Entrepreneurial* includes: (1) Understanding of green finance concepts, (2) Ability to manage cash flows and sustainable investments, (3) Ability to access green funding (*Green Loans, Impact Investment*), (4) Utilization of alternative financial instruments (*Crowdfunding, Green Microfinance*).

## METHOD

This study uses qualitative approach with case study research. This approach was chosen because the purpose of the research was not to test the hypothesis statistically, but to understand in depth the phenomena, strategies, and dynamics of the implementation of the circular business model in Malang City, especially from the perspective of business actors, stakeholders, and supporting institutions. According to Creswell, (2021), qualitative research allows researchers to explore the meaning, processes, and contexts behind human actions in real-world situations. This approach is in accordance with the focus of research that wants to explain how business administration strategies, green human capital, and financial entrepreneurship play a role as drivers of circular business models in the MSME environment of Malang City. The research was conducted in Malang City, East Java Province, which is known as the city of education and creative economy. Malang was chosen because it has the characteristics of dynamic business actors and is starting to be exposed to sustainability issues, but still faces limitations in implementing the principles of a circular business model. This local context is important because it shows how national policies such as the green economy and clean energy transition are implemented at the micro level, particularly in Indonesia's urban business ecosystem.

The focus of this research is to understand the interaction and role of the three main dimensions, business administration strategies, green human capital, and financial entrepreneurship as the main drivers in building and running a circular business model in Malang City. The research analysis unit includes



- (1) MSME actors and green startups,
- (2) Local governments and supporting institutions (Cooperative Service, Environment Office, Higher Education Business Incubator).
- (3) Financial institutions or socioeconomic communities involved in sustainable funding.

The data analysis process is carried out systematically through the stages of data reduction, data presentation, and conclusion drawn, using triangulation techniques to ensure validity, consistency, and richness of perspective in research findings. The results of the analysis are interpreted inductively to explore relevant strategic patterns in the implementation of the MSME circular business model..

## RESULTS AND DISCUSSIONS

### Results

The results of the study show that Malang City has a dynamic business ecosystem, especially in the culinary, fashion, handicrafts, and digital creative services sectors. Based on interviews with representatives of the Cooperatives and MSMEs Office (2025), around 60% of MSME actors in Malang have begun to recognize the terms *green business* and *circular economy*, but only about 15-20% have applied sustainability principles in real terms, such as material recycling, energy efficiency, or reducing production waste. Most business actors are still oriented towards cost efficiency and short-term profit increase, while environmental and social sustainability aspects are not yet the main focus. However, there is a positive trend: the emergence of a community of young entrepreneurs who are starting to integrate sustainability values into business processes, especially in the generation of entrepreneurs aged 25–40.

The results of the analysis show that business administration strategies play an important role in directing organizations towards circular business practices. Several MSME actors who have become informants have adopted digital-based administrative systems, especially for inventory management, financial recording, and marketing. This strategy improves operational efficiency while reducing the waste of materials and time. A recycling fashion business in Lowokwaru District explained that administrative digitization helps them "minimize paper use and optimize the supply chain of used materials into value-added products."

From the results of the interview, it was revealed that most MSME actors in Malang City began to realize the importance of business administration efficiency, especially in the context of resource management and operations. Digitization of recording systems, online marketing, and integration with local supply chains is the first step towards sustainable efficiency. "Initially, all the processes I did manually, a lot of materials were wasted and the stock was not recorded. After using a simple digital system through Excel and marketplaces, the wasted materials can be reduced by up to 30%. So, administrative efficiency also has an effect on material savings." (W/01/001/IK). However, not all business actors have the same abilities and awareness. Some informants admitted that they still use the traditional administrative system. A local culinary actor (Informan 05) stated: "We still use paper notes because we are not used to using computers. Sometimes financial reports are late, so it's difficult to manage materials and stocks." (W/02/002/IK). These findings suggest that adaptive and efficiencybased business administration strategies are an important step in driving the adoption of circular business models. Digitalization not only speeds up the process, but also reduces the waste of materials and energy, as well as increases the competitiveness of MSMEs.

In addition, some MSMEs have begun to implement *simple green governance*, such as recording waste and monitoring the use of environmentally friendly raw materials. "I started this business because I want a product that is healthy but also environmentally friendly. We use cups made from sugarcane, stainless straws, and our fruit waste into compost. But there are not many like this, because most of my friends still think about the cost first." (W/03/003/IK). This finding is strengthened by a statement from

an official of the Malang City Environmental Agency: "The awareness of MSME actors on environmental issues is starting to increase, but the development of green human resource capacity is still minimal. We have only reached around 10% of MSMEs for waste management and energy efficiency training." (W/04/004/IK).

However, most still face obstacles in the managerial aspect, especially in the preparation of long-term strategic plans and evaluations based on sustainability indicators. This data shows that the implementation of an effective and adaptive business administration strategy is still a major challenge in the transition to a circular business model.

The next findings confirm that green human capital is a crucial factor that distinguishes business actors who are able to adapt to the sustainability paradigm from those who are still conventional. The informant pointed out that green knowledge and skills are still relatively low among MSME actors. Most business owners have not received formal training on green production, energy efficiency, or waste management. However, young entrepreneurs and workers with higher education backgrounds tend to have stronger ecological awareness and take the initiative to implement green innovations in business. For example, one of the healthy culinary business actors in Malang City stated that they "try to manage organic waste into compost and use biodegradable packaging as part of the selling value of the product."

The results of the study also show that the development of *green human capital* depends not only on technical training, but also on an organizational culture that supports sustainability values. MSMEs with a collaborative culture and open to innovation are faster to adopt circular business practices than organizations with hierarchical managerial patterns.

From the results of interviews with local business actors and financial institutions, it was identified that financial entrepreneurship plays a role as the *main enabler* in realizing a circular business model. Business actors who have high financial literacy and the ability to access alternative funding sources are better able to innovate in creating green products and services. Some MSME actors in the handicraft sector, for example, use crowdfunding schemes to develop products made from recycled materials, while others collaborate with microfinance institutions that offer financing with environmental principles.

However, many business actors still find it difficult to gain access to green financing schemes, due to limited information and the lack of green financing instruments that are easily accessible at the local level. One of the informants from the Cooperative Office said that "the green credit scheme actually exists, but MSME actors have not understood the procedures and application criteria." These findings show that financial entrepreneurship capabilities, including financial literacy, financing innovation, and sustainable risk management are important factors that need to be strengthened to accelerate the implementation of the circular economy in Malang City.

The results of the study found that the three main factors of business administration strategy, green human capital, and financial entrepreneurial interact with each other and form a synergy pattern that determines the success of the implementation of the circular business model. Efficient administrative strategies become the systemic foundation; green human capital is the driving force for innovation; and financial entrepreneurship function as a supporting resource that ensures the financial sustainability of the business.

MSMEs that successfully integrate these three aspects tend to have better business performance, with balanced economic and social added value. For example, several recycling-based social enterprises in Malang City have succeeded in creating a circular ecosystem by involving the surrounding community as suppliers of used materials, labor, and consumers. This model reflects the real integration between *profit, planet, and people*, the three main pillars in the sustainability paradigm.

The results of the study also identified several main challenges in the development of circular businesses in Malang City. These challenges include: (1) limited knowledge and training on the circular economy, (2) weak support for incentive policies for green MSMEs, (3) difficulties in accessing sustainable financing, and (4) lack of cross-sectoral collaboration networks. However, this study finds great opportunities in the form of increasing environmental awareness among the younger generation, potential collaboration with universities, and national policy support towards the green economy by 2045.

In general, the results of this study show that strengthening adaptive business administration strategies, green human resource development, and sustainable financial innovation are important foundations for the implementation of circular business models at the local level. The integrated implementation of these three strategies is believed to be able to encourage MSMEs in Malang City to become the main actors in a competitive, sustainable, and inclusive green economy.

### **Discussions Business Administration Strategy and Circular Efficiency**

This study confirms that Adaptive and efficiency-based business administration strategy is an important foundation in building a circular business model. Digitization of administrative processes, implementation of green supply chain management (*Green Supply Chain Management*), as well as datadriven recording and reporting systems proven to be able to reduce material waste and increase productivity. These results support the findings Amjad et al., (2025) and Boonsuwan, (2023) which states that administrative innovation plays an important role in strengthening the circularization process at the organizational level, as it allows companies to manage inputs and outputs more efficiently. In the context of Malang City, MSMEs that implement simple administrative digitalization such as recording raw material stocks and use *Marketplace* Digital shows resource efficiency of up to 30%, as revealed by one of the informants. Theoretically, these results strengthen the framework *Dynamic Capabilities Theory* (Teece, 2007) which emphasizes the ability of organizations to adapt their resources to changes in the external environment. Thus, business administration strategy is not only an operational function, but also a strategic instrument that builds business resilience and adaptability in the face of environmental challenges.

### **Green Human Capital as a Catalyst for Organizational Transformation**

The research findings show that Green Human Capital It acts as an important catalyst in driving the transformation towards a circular business model. Ecological awareness, sustainability values, and technical capabilities in managing environmentally friendly resources are the main drivers in building a greener business system. However, this study also found that the level of awareness and competence of green is still uneven among MSME actors in Malang City. Most of the younger players show a higher ecological orientation than the older generation, who are still focused on short-term profits. These results are consistent with Jabbour research and Mahmood & Nasir, (2023) which confirms that the successful implementation of green business practices is highly dependent on *Green Knowledge*, *Green Skills* and *Green attitude* from the organization's human resources.

In the local context, the limitations of formal training and an unsupportive organizational culture are the main obstacles to the development of green human capital. This is in line with the findings Górska & Prusak, (2023) which states that green HR development strategies require synergy between training, transformational leadership, and reward systems that emphasize the value of sustainability. Thus, the results of this study reinforce the importance of an integrated green human resource training policy between local governments, educational institutions, and local industry players in Malang City.

### **Financial Entrepreneurial as an Enabler of Circular Business Models**

The results of the study also confirm that financial entrepreneurial capabilities are the main *enablers* in encouraging the sustainability of circular business models. Business actors who are able to innovate in financing—through mechanisms such as *crowdfunding*, social partnerships, and *impact investing*—



are better able to maintain circular practices consistently compared to actors who rely only on conventional capital.

These findings are in line with research Sekita et al., (2022) and Balasubramnian & Sargent, (2020) which states that *Financial Innovation* and *Entrepreneurial Financing* has a significant role in expanding access to sustainable finance and accelerating the transition to a green economy. In Malang City, the emergence of community financing schemes and support from environmental social institutions point to a positive direction towards an inclusive financial system that supports sustainability.

However, the study also found that access to *green credit* and fiscal incentives is still very limited. Banks and local financial institutions have not fully developed green financial products that are easily accessible to MSMEs. This condition shows the need for public policy intervention in expanding the green finance ecosystem at the regional level, as recommended by the OECD (2023) in the *Green Finance Policy Framework*.

### Three-Factor Synergy as a Driver of Circular Business Models

One of the main theoretical contributions of this research is the discovery of synergistic interactions between business administration strategies, green human capital, and financial entrepreneurship in strengthening circular business models. These three factors do not run in a linear fashion, but reinforce each other in creating sustainable economic value.

An efficient administrative strategy provides a structure and system that allows circular practices to be implemented in a measurable manner; Green Human Capital provides capabilities and awareness that drive sustainable innovation; Meanwhile, financial entrepreneurial ensures the sustainability of the financial resources needed to maintain circular practices.

This model is consistent with the concept of the *Integrated Sustainable Business Model* put forward by Lüdeke-Freund et al. (2019), which states that the success of circular business models is highly dependent on the integration of organizational, human, and financial dimensions within a single systemic framework. Thus, the results of this study offer a new conceptual model that places these three factors as the main drivers of the circular economy at the urban MSME level.

### CONCLUSION

This study concludes that the success of the implementation of a circular business model in Malang City depends on the synergy between business administration strategies, green human capital, and financial entrepreneurship. An efficient and adaptive business administration strategy can increase productivity and reduce resource wastage. Green human capital plays an important role as a catalyst for change through increasing ecological awareness and green competence of human resources. Meanwhile, financial entrepreneurship is a driving factor that ensures sustainability through financing innovation and access to green funding.

These three factors interact with each other and form a system that strengthens sustainability practices at the MSME level. Theoretically, this research expands the understanding of circular business models by integrating managerial, human, and financial aspects in a single conceptual framework. In practical terms, the results of the study confirm the need for collaboration between local governments, educational institutions, financial institutions, and business actors to accelerate the transition to an inclusive and sustainable green economy in Malang City.

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