

Uncovering the Sustainability Practices of MSMEs Coffee Shop in Bandung with PESTEL Analysis

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ABSTRACT

Coffe shop MSMEs play an important role in the creative economy and urban culture in Bandung, but the adoption of sustainability practices in this sector still faces various obstacles. This research responds to the lack of empirical studies that map the sustainability practices of MSMEs with a multidimensional approach in the context of developing cities. This study aims to find out how MSME coffee shops in Bandung are with the application of PESTLE Analysis. Using a qualitative approach, data was collected through in-depth interviews, observations, and document analysis at four local coffee shops over a two-month period. Results show that sustainability practices have been implemented through operational efficiency, the use of eco-friendly raw materials, community engagement, and customer education. However, resource limitations, green technology costs, and lack of certification support are major obstacles. Digitalization and innovation strategies have proven to be key elements in maintaining business sustainability, even though the adoption of renewable energy is still low. All shops have met the basic legality aspects, but require further facilitation from the government. This study offers a new empirical contribution in understanding the sustainability dynamics of MSMEs in urban areas, as well as providing strategic recommendations for policymakers and business actors.

INTRODUCTION

Coffee shops have grown rapidly as part of the lifestyle in various major cities, including Bandung. As part of the MSME sector, coffee shops not only play an important role in the local economy but also in shaping culture and consumption trends. As awareness of environmental and sustainability issues increases, many coffee shops are starting to consider the impact of their business practices on the environment and society.

Sustainability in the coffee shop business can include various aspects, such as the use of environmentally friendly raw materials, efficient waste management, and the empowerment of local communities through partnerships with coffee farmers. However, the implementation of these sustainability practices often faces various challenges, including limited resources, knowledge, and technology.

Bandung as one of the cultural and economic centers in Indonesia that offers a unique context to explore how coffee shop MSMEs implement sustainability practices, differences in regulations, culture, and consumer markets in this city can provide valuable insights into the factors that influence the success and obstacles in implementing sustainability practices.

Previous research has discussed various factors that affect the sustainability of coffee shop businesses, ranging from managerial factors and service quality (Binagusto, 2020), organizational learning culture and financial access (Aprilia et al., 2023), to waste management initiatives that have an impact on cost savings and community involvement (Alfarizi et al., 2023; Mulyany et al., n.d.). Like in Yogyakarta, This social value is implemented through several practices such as serving coffee from Indonesia, planting telang flowers, separating organic and plastic waste, and serving with environmentally friendly serving utensils (Jurnal et al., 2023). However, most of those studies are still limited to one or two dimensions of sustainability, without integrating a holistic approach that includes political, economic, social, environmental, technological, and regulatory dimensions. In addition, studies with a qualitative approach that explore sustainability practices in depth at the MSME level, especially in urban areas such as Bandung, are still relatively rare.

The PESTEL analysis approach is one of the analysis methods that can be used to identify factors that affect an activity. An analytical tool for strategic business planning, PESTEL analysis offers a framework for understanding external factors that affect organizations or other types of entities. PESTEL is a useful tool for determining variables that can affect the outcome of a project. The PESTLE analysis can serve as a basis for identifying opportunities and threats that help in SWOT analysis. The PESTEL framework mainly concerns six factors: political, economic, social, technical, environmental, and legal To ensure sustainable renewable development, the PESTEL analytical framework focuses on the issues that need to be managed by business actors and policymakers (Christodoulou & Cullinane, 2019) (Sugiyono et al., 2022) (São Paulo et al., 2018).

Based on this background, this study aims to examine the sustainability practices implemented by coffee shop MSMEs in Bandung, identify the main

obstacles they face, and explore opportunities that can be used to strengthen sustainability strategies integratively. This study did not analyze financial statements directly due to limited data access. The economic aspects in PESTEL are identified through interviews and observations. However, the findings remain linked to accounting, particularly the importance of simple record-keeping that separates green costs to help MSMEs monitor the efficiency and economic impact of sustainability practices. This research is also expected to make a practical contribution in the form of recommendations for business actors, policy makers, and educational institutions in strengthening the adoption of sustainability principles in the MSME sector.

LITERATURE REVIEW

Sustainable Practices of MSMEs

Sustainable of MSMEs has grown, and it is now commonly recognized to encompass economic viability, environmental sustainability, and social responsibility. As a result of their predisposition for sustainable business practices, companies with a high propensity for sustainable business practices will be better prepared to address the obstacles associated with adopting the Triple Bottom Line into their enterprises and business networks (Høgevold et al., 2015). The ability to transition swiftly and successfully to new business models is a substantial source of long-term competitive advantage. It considerably impacts an organization's overall sustainability performance (Geissdoerfer et al., 2018). Organizations are under increasing pressure to transition from conventional to sustainable manufacturing models, highlighting the importance of evaluating their performance in terms of environmental and social sustainability (Gupta et al., 2021).

PESTEL ANALYSIS

The PESTEL analysis approach is one method of analysis that can be used to identify the factors influencing an activity. An analytical tool for strategic business planning, PESTEL analysis offers a framework for comprehending the external factors affecting an organization or other kinds of entities. PESTEL analysis is a useful tool for determining the variables that may affect a project's outcome. PESTLE analysis can serve as a foundation for identifying opportunities and threats that aid in SWOT analysis. PESTEL framework primarily concerns six factors: political, economic, social, technology, environmental, and legal. To ensure sustainable renewable development, the PESTEL analytical framework focuse on uncovering sustainability practices MSMEs of coffee shop in Bandung. To conduct PESTEL, this study utilizes references from literature, scientific journals, and other documents related to energy transition activities.

Politic

There factors determine the extent to which a government may influence the economy of a certain industry. Among them are government stability and tax implication.

Economy

These factors are determinants of the economy's performance that directly impact on the markets and have resonating long term effect. Effect to Financial Sustainability, Operational Efficiency, Competitiveness, and Supply Chain Sustainability.

Social

These Factors scrutinize the social environment of the market and gauge determinants such as cultural trends, demographics, population analytics. Employee Well-Being, Community involvement, Customer Education, and Employee Rights.

Technology

These factors pertain to innovations in technology that may affect operations of the market favourably or unfavorably. Application of Environmentally Friendly Technology and Operational Digitalization.

Environment

The environment analysis includes all those that are influenced are the determined by the surrounding environment. Waste Management, Energy Efficiency, Use of Environmentally Friendly Raw Mater, Customer Data Security and Digital Transactions and Innovation in serving and processing coffee.

Legal/Law

Legal analysis takes into account both policies and laws that affect the industry on these angles and then charts the strategies of these legislation. Compliance with Health Standard, Eco-Friendly Business Certification, Business Legality and Government Support Policy for MSMEs.

METHODOLOGY

Research Design

This research uses qualitative methods to explore and uncover sustainability activities in coffee shop practices in Bandung. The qualitative method was chosen for its ability to provide an in-depth understanding of coffee shop experiences, perspectives, and practices in the context of sustainability (Creswell, 2013).

The four coffee shops each have unique characteristics, namely Caffe Layung which highlights affordable prices, comfortable places, strategic locations, good digital marketing, and varied menus; Caffe Bigpond with good coffee quality, affordable prices, strategic location, extensive network with coffee farmers, and customer education activities; Caffe Demos which offers a spacious and comfortable place, affordable prices, employees from the local community, location around campus, varied menus; and Caffe Headquarters which focuses on affordable prices and good coffee quality.

Observations were carried out directly at the coffee shop location during the research period, namely December 2024 to February 2025, with various

operational hours to capture the dynamics of daily practices and interactions with customers. The documents analyzed included promotional materials, informal financial statements, social media content, and documentation of activities related to sustainability initiatives.

Location and Participants

This research was carried out in the city of Bandung, which is known as one of the centers of creative economic growth and coffee consumption culture in Indonesia. Bandung was chosen because it has a dynamic ecosystem of coffee shop MSMEs and a relatively high level of consumer awareness of sustainability issues, making it a relevant context to study sustainable business practices.

A total of four MSME coffee shops were selected purposively (Yin, 2017) based on several criteria: (1) have been operating for at least two years, (2) have initiatives or reputations related to sustainability practices, such as the use of local ingredients, waste management systems, or community social activities, and (3) reflect the diversity of operational approaches, business scale, and market segmentation. Interviews were conducted with coffee shop owners, managers, and managers to explore their understanding of the concept of sustainability and its application in daily activities.

Data Collection Techniques

Observations in this study were carried out every two weeks for two months. Each observation session lasts for 2-3 hours, focusing on routine coffee shop activities and the implementation of sustainability practices. A bi-weekly frequency is chosen to ensure consistent documentation of changes in coffee shop management, resource utilization, and waste management. This approach provides rich and in-depth data on sustainability dynamics among MSME coffee shops in Bandung.

1. In-depth Interviews

In-depth interviews were conducted with workers such as café owners and managers in the city of Bandung to understand the sustainability practices implemented, the challenges faced and the impact of these practices on the environment and social well-being. Each interview session lasts between 45-90 minutes and is recorded and transcribed for analysis. This method refers to the approach suggested by DiCicco-Bloom which emphasizes the importance of building empathic relationships to obtain authentic qualitative data (Barbara Diccico-Bloom, 2006).

2. Field Observation

Observations are carried out directly at the coffee shop location to understand sustainability practices in the context of daily operations. The activities observed included raw material management, waste disposal systems, energy efficiency, customer engagement, and the use of supporting technologies. Observations were made once every two weeks over a two-month period, with each session lasting between 2 to 3 hours. This approach allows for gradual and

continuous documentation of changes, while amplifying the data obtained from interviews. This method refers to the observational ethnographic framework as outline (Angrosino, M. (2007). *Doing Ethnographic and Observational Research*, n.d.)

3. Document Studies

Document studies are complementary to the use of observation and interview methods in qualitative research. . The documents analyzed included promotional materials, internal activity reports, informal operational records, social media uploads, and posters related to sustainability issues at the site. Document studies strengthen the credibility of the data by providing written evidence of informant statements and field observations (Nilamsari, 2014) the existence of documents as a secondary data source is important in building a complete framework of understanding and increasing the validity and depth of qualitative analysis.

Data Analysis Techniques

Data obtained from interviews, observations, and documentary studies were analyzed using a thematic analysis approach (Clarke & Braun, 2013).

The analysis process is carried out in several stages as follows:

- a. Coding: Transcript data from interviews and observation notes are coded to identify key themes related to coffee shop sustainability in relation to coffee shop sustainability. Coding is carried out using qualitative methods. Table 1 shows the codes used in this study.
- b. Grouping and Categorization: The generated code is grouped into main categories that reflect the dimensions. which is the main framework of the research, namely: political, economic, social, environmental, technological, and legal (law and regulation). This process allows for a more systematic formulation of data structures and helps to relate empirical data to a conceptual framework.
- c. Thematic analysis: Key themes were analyzed to identify patterns, relationships, and differences in sustainability practices among different locations. This analysis helps in understanding how sustainability principles are applied in real practices and challenges faced by farmers (Clarke & Braun, 2013).
- d. Triangulation: Data from various sources (interviews, observations, and documentation) are compared and combined to improve the validity and reliability of the findings. Triangulation is carried out to ensure that the results of the study reflect a comprehensive and accurate picture of sustainability practices in coffee shops in Indonesia (Flick, 2018).

Validity and Reliability

To ensure the validity and reliability of this study, the following steps were taken:

- a. Member examination: The results of the analysis and preliminary findings are confirmed with the participants to ensure the accuracy and consistency

of the information obtained. These findings can help stakeholders develop policies that support sustainability in coffee shops (Armstrong, 2010).

- b. Triangulation: The use of various data collection techniques and information sources to verify findings and improve the accuracy of research results (Fusch et al., 2018).
- c. Documenting the research process: The entire participatory research process (Office of Human Research Protection, 1979). The confidentiality of the information and personal data obtained has been strictly maintained, and participants have the opportunity to withdraw from the study at any time without negative consequences (Shamoo & Resnik, 2007).

RESEARCH RESULTS

Interviews, observations, and documentation in this study were conducted with PESTEL analysis. This dimension-based approach is used to ensure that the data collected covers key aspects of the sustainability practices of coffee shop MSMEs comprehensively.

This research involved four main informants who each represented MSME coffee shops in the city of Bandung. These four informants, who in the research report were identified as Informants A, B, C, and D, were selected purposively based on their active involvement in the management of the shop and the initial indication of sustainability practices in their place of business.

With the direct involvement of business actors, as well as the focus of the analysis directed at the PESTEL Analysis, this study seeks to explore a deep understanding of how MSME coffee shops in Bandung respond to and apply sustainability principles in their local context.

Dimension

1) Politics

- a) Government Stability: In the results of the research conducted from the indicators of government support policies for sustainable MSMEs, all coffee shops expect to be further improved in subsidies, training and incentives for MSMEs, because they are considered helpful and have a big impact on the sustainability of coffee shops. Government policies play an important role in encouraging the growth and sustainability of Micro, Small, and Medium Enterprises (MSMEs). Various studies emphasize that supportive policies, including entrepreneurial interventions, monetary policy, and digital technology development, have a significant impact on the performance of MSMEs (Ramadhan et al., n.d.).
- b) Tax Implication: MSME awareness of tax payments has been implemented, but for coffee shops D it is still below taxable income so they are not required to pay tax/nil. To encourage the emergence of motivation and discipline in taxation, the government continues to strive to create a concise and easy-to-implement tax administration system. This is because the discipline of the taxpayer to implement tax provisions, especially in calculating, depositing

and reporting taxes payable, is an indicator of the success of implementing the provisions of the Tax Law (Sabaruddin, 2022).

2) *Economy*

- a) **Financial Sustainability:** Coffee shops A and D say that they do not have a special strategy to deal with financial challenges such as the increase in raw materials or price competition, because these two shops tend to follow the price given from distributors which is volatile, so what can be done is to reduce the margin when the price of raw materials rises, without reducing quality, while coffee shops B and C have different targets, coffee shops B have a special target by using quality coffee bean raw materials that have been estimated at the price by knowing the right price at the beginning utilizing networks and relationships with coffee farmers and roasters even to world-level coffee and have good financial planning and management managed by a master of accounting, while coffee shop C has a special target, namely to reduce revenue margins and strengthen marketing, because according to this coffee shop informant, the more purchases made by consumers, the more capital will be returned even though the margin is being reduced. Object Economic Perspective shows good economic results, achieving BEP ahead of target and preparing future investment strategies. They use forecasting methods to forecast future conditions, ensuring continued financial performance and profitability for the company (Purwadi et al., 2024)
- b) **Operational Efficiency:** Each coffee shop has its own system to carry out the operational efficiency of its shop, but shops A and D have the same system, namely an online system to see price changes if there is an increase in raw materials that affects the cost of goods sold and operations. For coffee shop B the system used is the purchase of raw materials from the first hand so that operational efficiency can be carried out perfectly, while for coffee shop C uses a delivery order system by utilizing students around the coffee shop as an introductory motorcycle taxi.
- c) **Competitiveness:** The value that coffee shops have in their advantages is quite varied, such as coffee shop A which prioritizes service and affordable prices, while for coffee shop B the advantage that this shop has is the education and insight given to customers when they come, that way this coffee shop has loyal customers, for coffee shops C and D have quite the same advantages, namely prices that can be reached by the lower middle class with does not rule out the quality of the coffee itself.
- d) **Supply Chain Sustainability:** All coffee shops already use environmentally friendly raw materials and use high-quality raw materials. Maintaining the coffee supply chain so that coffee prices remain stable, increasing cooperation with coffee farmer partners around the production area, and helping coffee MSMEs in the form of facilities and infrastructure to increase coffee production (Mantik & Chatra, 2023).

3) Social

- a) **Employee Well-Being:** Employee welfare has been implemented from all these coffee shops, with various Steps, coffee shops A and B provide various medicines and vitamins as a step to meet the employee's Health benefits, and provide a decent salary, also offer skills upgrade training. Coffee shops C and D support health costs if there are sick employees.
- b) **Community involvement:** Being involved with the community is quite mandatory for all types of businesses, because the benefits of community involvement, especially with the local community, can increase awareness for the community about the existence of coffee shops. Coffee shop A has been involved by holding a Friday blessing at the Orphanage Foundation, joint sports activities, coffee shops B, C and D have been involved as event sponsors.
- c) **Customer Education:** Educational for customers has been carried out by all coffee shops. Kedai Kopi A provides information about the origin of coffee raw materials to customers. Kedai Kopi B stands out in customer education as part of a high-quality coffee drinking experience. Kedai Kopi C has provided information about the type of coffee beans they use. Kedai Kopi D also provides transparent information about the coffee raw materials they use.
- d) **Employee Rights:** employee welfare is also an important factor in the operation of a coffee shop. One form of protection that can be provided to employees is social security or health insurance. Although all coffee shops have not registered their employees to get social security such as BPJS, all coffee shops provide in other ways such as providing decent wages, medicines, vitamins, and financing if there are sick employees. Yuanita (2015) revealed that sustainable development can only be achieved with harmonization carried out by companies in economic, social, and environmental aspects (Yuliarini & Inayati, 2022).

4) Technology

- a) **Application of Environmentally Friendly Technology:** The use of energy-saving machines in coffee shops A, B and D cannot be implemented, because to produce good taste requires a machine with high energy. However, coffee shop C has started to implement some energy-efficient machines.
- b) **Operational Digitalization:** All coffee shop informants we interviewed have all used social media as an online marketing tool either through applications such as Instagram, TikTok and Facebook by creating content, coffee shops A and B also implement Google Ads, and invite influencers to expand their customers.

5) Environment

- a) **Waste Management:** Coffee Shop A collects waste and submits it to the authorities and pays waste fees to the Environment Agency. Coffee Shops B and D provide coffee grounds to those in need, although their effectiveness is still limited. Kedai Kopi C uses cups in serving coffee and reduces plastic

waste except for take-away. The study of the calculation of the Household Waste Control Index in Bekasi City is in the moderate category (5.86 out of 10), and the governance of home waste management at the community level still needs to be addressed (Alfarizi et al., 2023).

- b) **Energy Efficiency:** The use of renewable energy such as solar panels has not been implemented in all coffee shops, as the cost of solar panels is quite expensive. So all coffee shops still use normal energy in their operations, but coffee shop B has tried to reduce energy as much as possible.
- c) **Use of Environmentally Friendly Raw Materials:** The use of raw materials or packaging that is easy to describe the informant said that Coffee Shop A still uses standard packaging, but has started using paper cups for hot coffee. Kedai Kopi B ensures that all the raw materials they use are organic, and the serving chooses to use glass cups, Kedai Kopi C and D use environmentally friendly raw materials, but have not implemented biodegradable packaging.
- d) **Customer Data Security and Digital Transactions:** In Customer Data Security, there are no coffee shops that ask for data so there is no need to implement data security, and digital transactions have been made such as payments either through bank transfers or Qris.
- e) **Innovation in serving and processing coffee:** Innovating in serving is certainly done by all coffee shops by increasing creativity and updating the menu served so that coffee shops can grow and attract more customers.

6) Law and Regulation

- a) **Compliance with Health Standards:** Food safety and health are important aspects of a coffee shop's operations. Good standards ensure that the raw materials used are safe to consume and do not pose a health risk to customers. All the coffee shops we interviewed approved and ensured that the raw materials used were compliant with Health standards.
- b) **Eco-Friendly Business Certification:** Certifications such as halal and organic can increase customer trust in the products offered by coffee shops. This certification is also proof that the shop has met certain standards in its operations. Coffee Shops A and D have not registered a halal certificate, Coffee Shop B which only sells coffee does not need a halal certificate because there are no harmful/haram ingredients. Coffee shop C already has a halal certificate.
- c) **Business Legality:** The sustainability of a business cannot be separated from legality aspects, such as business licenses and compliance with tax regulations. For the coffee shops we interviewed, all of them had no difficulty when registering their licenses.
- d) **Government Support Policy for MSMEs:** In running a business, coffee shop owners certainly have expectations for policies and support from the government so that their business can develop sustainably. Coffee shop A hopes that the construction of roads, infrastructure and an increase in employee wages, coffee shop B hopes that every distribution of aid funds can be right on target and the government understands and traces what is being implemented, coffee shop C hopes to be known and reached more widely

than outside coffee shops that have a more marketing budget, and coffee shop D hopes to increase training assisted for halal certificates, copyright/brand, holding a bazaar for MSMEs through exhibitions that can increase the awareness and income of coffee shops.

DISCUSSION

Dimensions of Economy

- a) **Financial Sustainability:** In this dimension, coffee shops have steps to deal with the increase in raw materials or price competition by having financial and revenue management planning and management (Informant B). Therefore, it is necessary to study the calculations of finances in detail to find out the feasibility of the investment that will be made so that the company can allocate its resources to the maximum to make a profit. (Putri et al., 2020) In the results of the research conducted on the coffee shop that is the object of the overall research, simple financial records are still used. SAK EMKM is a financial accounting standard intended for MSMEs. The implementation of SAK EMKM in Indonesia is effective as of January 1, 2018 which was previously in the form of SAK ETAP. However, a review of previous research explains that only 36% of MSME owners have ever known about SAK ETAP (Mubiroh et al., 2019).
- b) **Operational Efficiency:** Coffee shops reveal that they have a system to carry out efficiency such as an online system to see price changes if there is an increase that affects the revenue margin, which states that operational efficiency and good human resource management can increase the profitability of micro, small, and medium enterprises (MSMEs) (Tuti et al., n.d.).
- c) **Competitiveness:** Each coffee shop must have its own advantages in order to compete with other shops. Coffee shops that have high-quality materials will be able to survive (Informants A, C and D). Each coffee shop carries different characteristics and offers a unique concept of a different café or restaurant business. Thus, XYZ coffee shops need to have superior strength and marketing strategies to be able to compete with other coffee shops, including by offering product quality and service that satisfies consumers (Hesty Nurul Utami¹, 2023).
- d) **Supply Chain Sustainability:** Informants A, B, C and D agreed that using local and high-quality raw materials supports supply chain sustainability. The utilization of high-quality coffee beans from local farmers can strengthen an efficient supply chain system (Taib and Purnama Dini Hari, n.d.).

Dimension of Social

- a) **Employee Welfare:** All information conveyed that the welfare of employees has provided welfare to their employees, with various steps such as providing decent wages, providing drugs, vitamins and treatment costs if there are sick employees. One of the ways in which MSMEs survive is by improving the economic welfare of their employees through improving the living standards of employees and preventing employees from poverty.

- b) **Community involvement:** The benefits of community involvement, especially with the local community, can increase awareness for the community about the existence of coffee shops. Informant A has been involved by holding a Friday of blessings at the Orphanage Foundation, joint sports activities, coffee shops B, C and D have been involved as event sponsors.
- c) **Customer Education:** According to informant B, coffee shops need to provide education to customers about coffee, so that they not only enjoy coffee but also gain insights. Another effort to optimize product marketing is through improving the quality of products and services to increase customer value and providing more intensive education about the type of local coffee sold to customers as a competitive advantage in the food service industry (Utami & Kamilia, 2017).
- d) **Employee Rights:** All informants agree that the fulfillment of employee rights must be carried out. Providing a decent wage, providing medicines, vitamins, and health costs even though it is not yet in the form of insurance. They can meet the basic needs of employees such as food and drink so that their food welfare is achieved (Damayanti, 2023)

Dimensions of Environment

- a) **Waste Management:** Waste management from coffee grounds has not been carried out much, informants A, B, and D mentioned that the use of coffee grounds is not widely known to people, so it is still rare for people to ask for coffee waste. An example is the development of products from coffee grounds which is carried out through research and collaboration to create products that are environmentally friendly and have a positive social impact (Yolanda & Famiola, 2023).
- b) **Energy Efficiency:** Informants A, B stated that the price for solar panel power is quite expensive, so it cannot be applied in their coffee shops, informants C and D agree to this, especially for the MSME class there is not enough cost for the use of such renewable energy.
- c) **Use of Environmentally Friendly Raw Materials:** Informants A, B, C and D mentioned that the use of coffee beans in their coffee caddies has used organic raw materials. In addition, coffee consumers are also starting to switch to the trend of a healthy lifestyle, namely choosing organic products for consumption. The high cost of purchasing fertilizers due to limited access to subsidized fertilizers has made farmers switch to organic fertilizers (Rahayu et al., 2019). The use of environmentally friendly raw materials, namely organic coffee, has also shown that coffee shops care about environmental impacts, and shows the beginning of the achievement of the Triple bottom line. Triple bottom line (TBL) refers to the social, environmental, and economic value of an investment. This concept is increasingly prominent for economic development-related fields such as business, finance, planning, and real estate (Hammer & Pivo, 2017).

Dimensions of Technology

- a) Application of Environmentally Friendly Technology: Informants in coffee shops A, B, and D have not been able to apply environmentally friendly technology systems in their activities, to create a strong taste with good quality coffee, they have not found a machine with environmentally friendly technology that meets the standards of their coffee shops. Meanwhile, informant C, in addition to agreeing to this, has partly used energy-saving machines. Green or eco-friendly coffee shops can practically be divided into two categories, namely tangible and intangible. Visible refers to products or activities that can be felt by customers directly, on the other hand, invisible refers to activities that cannot be directly felt by customers. (Ali et al., 2024) the rapid growth of coffee shops has the potential to change the function of green land and affect environmental resilience (Salsabila et al., 2025).
- b) Operational Digitalization: The use of Digitalization in this modern era can be used, one of which is for marketing media as a tool to reach a wider range of customers, Informants in each store convey that they have used social media such as Instagram, TikTok, Google ads, and informants A and B mentioned additional by inviting influencers to expand their market. According to Hariyanti and Wirapraja (2018), one of the determinants of whether digital marketing works well or not is the use of influencers. By definition, an influencer is someone who is well-known on social media platforms (Andy Satia et al., 2023).
- c) Customer Data Security and Digital Transactions: All informants said that coffee shops do not store digital payment transaction data, because of the use of Qris which is directly connected to the edc machine. Sensitive data such as credit card numbers, personal information, and transaction details cannot be accessed by unauthorized third parties because QRIS uses data encryption to protect consumer data from merchants and vice versa (Natalia Kristanty, 2024).
- d) Innovation in Serving and Processing Coffee: All experts agree that innovations in serving and processing coffee must continue to be carried out. According to Mulyani (2015), innovation is a new process created by a company to develop products, create new products or update the production and distribution process, so that it is able to compete to obtain new market segments (Rachmasari & Suprapti, 2022).

Dimensions of Law and Regulation

- a) Compliance with Health standards: Health and food safety is one of the important aspects to be implemented in coffee shops. In this dimension, informants A, B, C, and D said that the taking of raw materials from producers clearly meets health standards. The main source of food safety problems lies in three components, namely entrepreneurs/producers, traders, and the consumer community caused by lack of knowledge, as well as violations and the absence of honesty. Therefore, the responsibility for food safety also lies in these three components (Anantasya Herningtyas & Nur Alifah, 2017).

- b) Environmentally Friendly Business Certification: Informants A and B said that their coffee shop did not have a halal certificate. However, the raw materials used are materials that do not contain haram/ dangerous elements. Informant C informed that the existence of a halal certificate increases public trust in his coffee shop. A halal certificate will show that the product is clearly a halal item and avoids syubhat, this is in accordance with the words of the Prophet PBUH who asked Muslims to avoid something that is syubhat and haram according to (Ahmad & Anwar, 2020).
- c) Business Legality: All informants stated that there are no difficulties in carrying out business licensing, the ease of registering their business online helps the business legality process. The provisions for business licensing that entrepreneurs need to have in the form of SIUP are based on the Regulation of the Minister of Trade (Permendag) No. 46/2009 concerning Amendments to Permendag No. 36/2007 concerning the Issuance of Trade Business License Letters. To make a SIUP, there are several options to make this business license, namely online and offline.
- d) Government Support Policy for MSMEs: In running a business, coffee shop owners certainly have expectations for policies and support from the government so that their business can develop sustainably. Informant A hopes that road construction, infrastructure = structure and increase in employee wages, Informant B hopes that every distribution of aid funds can be on target and the government understands and traces what is being implemented, Informant C hopes that it will be known and reached more widely than outdoor coffee shops that have a more marketing budget, and Informant D hopes that more training will be assisted for halal certificates, copyright/brand, holding a bazaar for MSMEs through exhibitions that can increase the awareness and income of coffee shops.

Relationship Between the Five Dimensions



Figure 1. Interconnection PESTEL Analysis

1. *Politic Dimension*

This dimension is very important and related to MSMEs, the policies made by the government will affect the sustainability of this coffee shop business. Awareness of paying taxes has been running for MSMEs in Bandung, so it is enough to reduce the burden on the government in educating entrepreneurs to pay taxes, even though there are still many MSMEs whose income is below the taxable income rate limit. these quotes demonstrate how SMEs in the survival stage of sustainability transformation are formalizing their sustainability approach and integrating sustainable practices into their business operations (Ansar et al., 2025).

2. *Economic Dimension*

This Dimension reflects how coffee shops manage financial sustainability through operational efficiency strategies, such as purchasing raw materials directly from first-hand suppliers and using price monitoring systems. Competitiveness is also strengthened through service differentiation, for example customer education about the quality of raw materials and the experience offered. The Grand Theory of this study refers to the RBV (Resource Based View) theory. In this theory it is argued that a company can achieve a sustainable performance and competitive advantage if it acquires valuable resources, valuable capabilities that are immaterial and cannot be replicated, and the company must have the ability to absorb and apply them (Widyaningsih & Widodo, n.d.).

3. *Social Dimension*

In this dimension, it highlights the welfare of employees by providing health facilities and decent wages. In addition, community involvement is an important part of the coffee shop's business strategy, which shows that the sustainability of the business does not only depend on the economic aspect but also on strong social relationships.

4. *Environmental Dimensions*

Showing that there are waste management efforts through the reuse of coffee grounds and the reduction of plastic waste, even though the application of renewable energy has not yet been implemented, coffee shops have also begun to face challenges in the application of environmentally friendly technology, innovation in serving coffee is part of the strategy to continue to attract customers.

5. *Technology Dimension*

This dimension shows that coffee shops have been active in digitizing operations through social media and e-commerce. However, it still faces challenges in the application of environmentally friendly technology. Innovation in the presentation of coffee shops is part of the strategy to continue to attract customers. E-Commerce store that encourages waste reduction and recycling through a point-based system these quotes demonstrate how SMEs in the

survival stage of sustainability transformation are formalizing their sustainability approach and integrating sustainable practices into their business Operations (Yolanda & Famiola, 2023).

6. Legal and Regulatory Dimensions

In this dimension, it is related to compliance with health and food safety regulations, where most coffee shops already use BPOM-certified and halal raw materials. However, the eco-friendly business certificate is not yet owned by coffee shop owners. Government support for MSMEs, such as training and certification assistance, is a hope for business owners to develop further. Figure 1 emphasizes that the Sustainability of Micro, Small and Medium Enterprises has a relationship between these dimensions in the practice of coffee shops in Bandung showing that sustainability is not only an economic aspect, but is also influenced by social, environmental, technological, and inseparable laws and regulations.

CONCLUSION AND RECOMMENDATION

The majority of MSME coffee shops in Bandung have tried to carry out environmentally friendly practices in five aspects of economic, social, environmental, technological, and legal. We can see from how they save operations, choose organic, paper cup selection, marketing through social media, raw materials, educate customers, and participate in activities with the local community. They have also complied with legality and health standards. However, MSMEs still have other problems, for example in waste management and renewable energy that have not been maximized. Fairly high costs and technology that is not easily accessible, as well as halal and eco-friendly certificates are still rare.

Seeing these problems, it is time for the government to intervene, such as through training, incentives, ease of obtaining certificates, and access to green technology. Coffee shops must also be more active in collaborating with local communities, being diligent in innovating, and taking advantage of digitalization in order to compete and have a positive impact on society. This is where the role of accounting becomes important, because good recording and reporting can help MSMEs monitor cost efficiency, measure sustainability impacts, separate environmentally friendly costs, and present transparent data for stakeholders. An accounting system designed with sustainability indicators can also make it easier for coffee shops to assess the performance of triple bottom lines (profit, people, planet) in a measurable manner. If all parties cooperate with business actors, communities, and the government, changes in the direction of more environmentally friendly MSME coffee shops in Bandung will be faster, and it is clear and the benefits can be felt by many people.

ADVANCED RESEARCH

Researchers can subsequently conduct research on the disclosure of sustainability practices by including evidence from the financial reports of the coffee shops studied using PESTEL Analysis or the Triple Bottom Line, which

strengthens the research results by emphasising at the outset of the research that researchers require the companies' financial reports for data purposes.

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