

Tini Adiatma<sup>1</sup>  
Sherly Harinda<sup>2</sup>

<sup>1</sup> Universitas Musamus

<sup>2</sup> Universitas  
Muhammadiyah  
Yogyakarta

## Pestle analysis for development of micro, small, and medium enterprises in Merauke City

### Abstract

Micro, Small, and Medium Enterprises (MSMEs) play a crucial role in national economic growth. This study aims to analyze external factors influencing the development of MSMEs in Merauke City. The research employs a qualitative descriptive approach combined with PESTLE analysis. The findings indicate that the external factors affecting MSME development in Merauke City encompass political, economic, social, technological, legal, and environmental dimensions. Political stability, regulatory support, and decentralization policies contribute to the creation of a conducive business climate. Post-pandemic economic recovery, access to financing, and government incentives provide significant growth opportunities, although challenges such as inflation and shifts in consumer lifestyles must be addressed. Social factors, including education levels, local culture, and environmental awareness, encourage sustainable product innovation. Technological challenges related to limited internet infrastructure and low adoption of e-commerce remain key constraints; however, these can be mitigated through targeted training programs and research-based support to enhance competitiveness. Compliance with prevailing laws and regulations, along with the protection of intellectual property rights, is essential to maintaining the legality and reputation of MSMEs. Furthermore, environmental factors offer opportunities for the development of eco-friendly products while simultaneously requiring MSMEs to manage risks associated with climate change and natural resource exploitation. The contribution of this study lies in providing a comprehensive and context-specific PESTLE-based mapping of external factors affecting MSMEs in a border-region setting such as Merauke City, which can serve as a strategic foundation for local government policy formulation and for MSMEs in developing adaptive strategies to enhance competitiveness and long-term sustainability.

**Keywords:** PESTLE, MSMEs, strategy, development, Merauke

### Abstrak

Usaha Mikro, Kecil, dan Menengah (UMKM) memegang peranan penting dalam pertumbuhan ekonomi nasional. Penelitian ini bertujuan untuk menganalisis faktor eksternal dalam pengembangan UMKM di Kota Merauke. Metodologi penelitian yang digunakan meliputi analisis deskriptif kualitatif dan analisis PESTLE. Hasil penelitian menunjukkan bahwa faktor eksternal yang memengaruhi pengembangan UMKM di Kota Merauke melalui analisis PESTLE meliputi aspek politik, ekonomi, sosial, teknologi, hukum, dan lingkungan. Stabilitas politik, dukungan regulasi, dan kebijakan desentralisasi menciptakan iklim usaha yang kondusif. Pertumbuhan ekonomi pascapandemi, akses pembiayaan, dan insentif pemerintah membuka peluang, meskipun tantangan seperti inflasi dan penyesuaian gaya hidup perlu diatasi. Faktor sosial seperti pendidikan, budaya, dan kesadaran lingkungan mendorong inovasi produk berkelanjutan. Tantangan teknologi terkait infrastruktur internet dan adopsi e-commerce perlu mendapat perhatian, sementara pelatihan dan penelitian dapat meningkatkan daya saing. Kepatuhan terhadap peraturan perundang-undangan dan perlindungan hak kekayaan intelektual menjaga legalitas dan reputasi UMKM. Faktor lingkungan menawarkan peluang bagi produk ramah lingkungan tetapi mengharuskan UMKM untuk mengelola risiko terkait perubahan iklim dan eksploitasi sumber daya. Dengan memahami faktor-faktor tersebut, UMKM di Kota Merauke dapat tumbuh lebih pesat dan berkelanjutan. Kontribusi penelitian

Implementasi **IMKA**  
Manajemen & Kewirausahaan

E-ISSN 2776 – 8554

<sup>1</sup> Corresponding author: Rafid Azmi Rabbani

Email: [azmirafid@gmail.com](mailto:azmirafid@gmail.com)

ini terletak pada penyediaan pemetaan komprehensif faktor eksternal berbasis analisis PESTLE yang kontekstual terhadap wilayah perbatasan seperti Kota Merauke, yang dapat menjadi dasar perumusan kebijakan pemerintah daerah serta strategi adaptif UMKM dalam meningkatkan daya saing dan keberlanjutan usaha.

**Kata Kunci:** PESTEL, UMKM, strategi, pengembangan, Merauke

## 1. Introduction

The development of Micro, Small, and Medium Enterprises (MSMEs) plays an important role in the national economy. MSMEs not only contribute to job creation and poverty reduction, but also become the driving force of local and national economic growth (Sarfiyah et al., 2019). With strong and growing MSMEs, the economic resilience of a region can be maintained, and the community can enjoy increased welfare (Takari et al., 2025). In Indonesia, MSMEs have shown significant development. Data from the Ministry of Cooperatives and SMEs shows that MSMEs contribute more than 60% to Gross Domestic Product (GDP) and provide employment for more than 97% of the national workforce (Contribution of MSMEs in the Indonesian Economy; MSME Indonesia-KADIN Indonesia). Various government policies and programs have been launched to support the development of MSMEs, including access to financing, training, and business assistance (Sinha et al., 2024). Merauke City, as one of the areas in the eastern tip of Indonesia, has great potential in the development of MSMEs. Various sectors, such as agriculture, fisheries, and handicrafts, are the backbone of the local economy. However, MSMEs in Merauke still face various challenges, including limited market access, inadequate infrastructure, and levels of education and skills that still need to be improved.

Strategic management is a process that involves planning, organizing, directing, and controlling organizational resources to achieve long-term goals (Saputra et al., 2024). This includes internal and external environmental analysis, goal setting, strategy formulation, implementation, and performance evaluation (Adiatma et al., 2023). Strategic management is a process that involves a series of decisions and actions to achieve organizational goals. David (2025) and Sugiarti et al. (2022) defines strategic management as the art and science of formulating, implementing, and evaluating cross-functional decisions that enable an organization to achieve its goals. According to Namazi and Rezaei (2024), strategic management helps organizations identify what they want to achieve and how to achieve it in a valuable way. This definition emphasizes the importance of integrating various management functions for organizational success (Sugiarti et al., 2022).

In the context of MSMEs, strategic management helps business owners understand the market, identify opportunities and threats, and allocate resources effectively (Agustini et al., 2025). Thus, MSMEs can adapt to changes in the business environment, optimize operations, and increase competitiveness (Putri & Kusuma, 2024). Strategic management in MSME development cannot be ignored. With good strategic management, MSMEs can plan long-term growth, reduce risks, and ensure that all members of the organization work towards the same goal (Sahoo et al., 2025). It also allows MSMEs to innovate, adapt to new technologies, and respond to consumer needs more quickly and efficiently (Harjoprawiro et al., 2024). By understanding internal strengths and weaknesses, as well

as external opportunities and threats, MSMEs can make better decisions and utilize their resources optimally. Ultimately, effective strategic management will help MSMEs improve performance, expand market share, and achieve long-term sustainability (Cintha & Rustiadi, 2023; Putri & Kusuma, 2024; Agustini et al., 2025). Situation analysis is the initial stage in strategic management that involves a comprehensive assessment of the internal and external environment of an organization (Fatmah et al., 2024). This process aims to identify factors that can influence the success or failure of the strategy to be implemented. The internal environment includes the organization's resources, capabilities, and core competencies, while the external environment includes market conditions, industry trends, competition, and relevant economic, social, political, and technological factors. By conducting a situational analysis, organizations can understand their current position, identify strengths and weaknesses, and recognize opportunities and threats in the market. In the context of MSMEs, situational analysis is very important to determine the right and effective strategic direction. This process usually involves tools such as SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) (Subaktilah et al., 2018), PESTEL (Political, Economic, Social, Technological, Legal, Environmental), and Porter's five forces analysis. SWOT analysis helps identify internal strengths and weaknesses and external opportunities and threats. PESTEL and Porter's five forces analysis focus on broader external factors that can affect the industry and market. By conducting a comprehensive situation analysis, MSMEs can make better strategic decisions, adapt to changes in the business environment, and develop strategies that can improve competitiveness and long-term growth.

External factor analysis is very important in understanding the dynamics that influence MSME development. By analyzing external factors, such as government policies, economic conditions, social trends, technology, the environment, and legal regulations, stakeholders can formulate more effective and adaptive strategies. PESTEL (Political, Economic, Social, Technological, Legal, Environmental) analysis is a comprehensive analysis tool for evaluating external factors (Christodoulou & Cullinane, 2019) that affect MSMEs. The objectives and benefits of external environmental analysis include several important aspects for the company. By analyzing the external environment, the company can identify opportunities that can be utilized and threats that need to be addressed to maintain competitiveness. The information obtained from this analysis helps in formulating strategies that are in accordance with market conditions and other external factors, so that strategic planning becomes more effective. In addition, understanding external factors allows management to make more appropriate decisions in dealing with environmental changes. This analysis also allows companies to be more prepared and responsive to changes that occur beyond their control (Huda & Martanti, 2018).

PESTEL analysis is a commonly used tool to examine macro-environmental factors. PESTEL is an acronym for Political, Economic, Social, Technological, Environmental, and Legal. Each element of PESTEL helps in understanding how external factors can affect a company's operations and strategies. This analysis allows companies to identify trends and changes in the external environment that may affect their business in the future (Sudiantini & Hadita, 2022; Sugiarti et al., 2022).

Through PESTEL analysis, existing opportunities and threats can be identified, so that MSMEs can better respond to changes and take advantage of existing opportunities. By using PESTEL analysis, organizations can identify external factors that need to be considered in strategic planning. For example, companies can use this analysis to identify

risks that need to be anticipated and opportunities that can be exploited. By understanding the dynamics of the external environment, organizations can make more informed and responsive decisions to market changes, which in turn increases competitiveness and business sustainability in the long term.

The sustainability of MSME businesses is highly dependent on the ability to adapt to external changes. By considering external factors, MSMEs can develop more resilient and sustainable strategies, ensuring business continuity amidst the dynamics of a changing business environment. PESTEL analysis needs to consider business sustainability factors that cannot be ignored. This analysis not only helps in short-term planning, but also in formulating long-term strategies that can ensure the continuity and growth of MSMEs amidst existing challenges. Many studies on MSMEs (Hiktaop & Kalakmabin, 2019) examine MSME development strategies in the Bhuyakha indigenous community, Jayapura; (Pangestika et al., 2016) examine MSME development with credit disbursement, SWOT analysis in determining business sustainability strategies (Sulistiyowati & Ayunina, 2021). Research with PESTEL analysis includes (Nandonde, 2019) regarding international retail in Africa, (Eierle et al., 2022) examining literature reviews of external factors with PESTEL analysis, and many more. Although there have been many studies on the development of MSMEs, there is still a research gap related to comprehensive external factor analysis using the PESTEL method, especially in Merauke City. The purpose of this study is to conduct an external factor analysis using PESTEL analysis in the development of MSMEs in Merauke City. By understanding the external factors that influence, it is hoped that a more effective strategy can be formulated to support the growth and sustainability of MSMEs in this area.

## 2. Literature review

### 2.1 Strategic management

Strategic management is a discipline that focuses on how organizations design, implement, and evaluate strategies to achieve competitive advantage and long-term goals (Hill & Schilling, 2014). One of the main theories in strategic management is the Resource-Based View (RBV) proposed by Barney, which states that an organization's competitive advantage depends on internal resources that are valuable, rare, difficult to imitate, and non-substitutable. This theory emphasizes that organizations must develop unique capabilities that competitors do not have in order to maintain long-term advantage. In addition to the RBV, the Five Forces Model theory developed by Porter (1980) explains how industry competitiveness is determined by five main factors: the threat of new entrants, the bargaining power of suppliers, the bargaining power of customers, the threat of substitute products, and rivalry between existing companies. This model helps organizations analyze the external environment and design more effective strategies. On the other hand, the Dynamic Capabilities theory developed by Teece (1997), Pisano, and Shuen emphasizes the importance of an organization's ability to adapt and change its internal resources according to rapid changes in the business environment. Strategic management is also influenced by the Stakeholder Theory proposed by Freeman (1984), which states that the success of an organization's strategy does not only depend on the interests of shareholders, but must also consider various stakeholders such as customers, suppliers, employees, and the wider community. This approach is increasingly relevant in the context of sustainable and ethical business. By understanding these theories,

organizations can design more effective strategies to achieve competitive advantage and sustainable growth.

## *2.2 Pestle analysis*

PESTLE (Political, Economic, Social, Technological, Legal, and Environmental) analysis is a framework used in strategic management to evaluate external factors that can influence an organization's strategic decision. Political factors include government regulations, trade policies, and political stability that can impact business operations and expansion strategies. Economic factors, such as inflation, interest rates, and economic growth, also play an important role in determining business strategy, especially in terms of investment and market expansion (Hill & Schilling, 2014).

Social factors include changes in demographics, culture, and consumer behavior that can influence a company's market preferences and marketing strategies. For example, increasing awareness of sustainability and social responsibility encourages organizations to adopt sustainability-based business strategies (Hitt et al., 2020). Technological factors also play a role in driving innovation and operational efficiency, where companies must adopt new technologies to remain competitive in a rapidly changing market. Meanwhile, legal factors, such as employment laws and industry regulations, can limit or provide opportunities for organizations in developing their business strategies.

Environmental factors are increasingly becoming a major concern in business strategies, especially related to climate change and sustainability (Barney & Hesterly, 2018). Companies must consider the environmental impact of their operations and develop green economy-based strategies to increase competitiveness. By understanding the factors in the PESTLE analysis, organizations can identify external opportunities and threats, and design adaptive and sustainable strategies. Therefore, PESTLE analysis becomes an important tool in strategic management to help organizations navigate market dynamics and ensure long-term competitive advantage.

## *2.3 Micro, small and medium enterprises*

Micro, Small, and Medium Enterprises (MSMEs) are an economic sector that plays an important role in economic growth, job creation, and poverty alleviation. MSMEs are defined based on the number of workers, turnover, and assets owned, with different classifications in each country. In Indonesia, according to Law No. 20 of 2008, micro businesses have maximum assets of IDR 50 million, small businesses have assets between IDR 50 million and IDR 500 million, while medium businesses have assets between IDR 500 million and IDR 10 billion. MSMEs have a large contribution to Gross Domestic Product (GDP) and exports, and are able to adapt to fluctuating economic conditions (Bank Indonesia, 2021).

One of the main challenges faced by MSMEs is limited access to financing and business capital (Beck & Levine, 2005). Lack of access to banking and formal financial institutions makes many MSME actors dependent on informal loans that often have high interest rates. In addition, limitations in marketing, technology, and innovation are also obstacles to the growth of MSMEs (Acs & Audretsch, 2010). Digital transformation has become an increasingly relevant solution for MSMEs to increase their competitiveness, such as through the use of e-commerce, social media, and financial technology (fintech) to expand market reach and improve operational efficiency (OECD, 2021).

To support the development of MSMEs, comprehensive policies are needed, including increasing access to financing, entrepreneurship training, and more flexible tax incentives and regulations (World Bank, 2020). The government and the private sector need to collaborate in creating a conducive business ecosystem for MSMEs to grow and develop. In addition, support in the form of digital literacy and technological innovation can increase the competitiveness of MSMEs in the global market. With its strategic role, strengthening MSMEs is one of the main keys to creating inclusive and sustainable economic growth.

### **3. Method**

This study uses a qualitative approach with the PESTEL method to analyze external factors that influence the development of Micro, Small, and Medium Enterprises (MSMEs) in Merauke City. The focus of this study is to understand how political, economic, social, technological, legal, and environmental factors shape business conditions for MSMEs. Data collection was carried out through document studies and in-depth interviews to obtain a comprehensive understanding of the external environment that affects MSMEs. Document studies include in-depth analysis of government reports, regulations, academic publications, and media articles to provide insight into policies and macroeconomic conditions. Meanwhile, in-depth interviews were conducted with MSME owners and managers, local government officials, and representatives from MSME support institutions to obtain first-hand perspectives on the challenges and opportunities they face.

The qualitative data obtained were analyzed using thematic analysis methods, which include interview transcription, systematic data coding, and identification of key themes related to PESTEL factors (Christodoulou & Cullinane, 2019). This process allows for in-depth interpretation of how each external factor influences the growth, sustainability, and strategic decision-making of MSMEs. For example, political factors such as government policies and support programs are evaluated to assess their impact on business regulations and incentives for MSMEs. Economic factors, including market conditions, inflation rates, and access to funding sources, are analyzed to understand their impact on business sustainability. Social factors, such as consumer behavior, cultural influences, and labor availability, provide insights into the adaptability of MSMEs in the local context. In addition, this study also evaluates the role of technological advances, including digital transformation and access to innovation, in improving MSME competitiveness. Legal aspects, such as compliance with regulations and business licensing procedures, are examined to understand the bureaucratic challenges faced by MSMEs. Finally, environmental factors, including sustainability policies and the impact of climate change, are analyzed to determine their impact on MSME operations. To ensure validity and reliability, this study applies data triangulation, integrating findings from interviews and document analysis to verify information and strengthen conclusions. With this comprehensive approach, this study aims to provide valuable insights into external challenges and opportunities that affect MSME development in Merauke City.

## 4. Results and Discussion

Based on the results of the research conducted, in general, external factors with PESTEL analysis of MSME development in Merauke City are:

### 1. Politics

This aspect includes government policies, regulations, and political stability in influencing MSME operations.

- a. In Merauke City, MSME development is carried out with local government programs and initiatives in supporting and empowering MSMEs through training, subsidies, and technical assistance
- b. Political stability in Merauke City supports the business and investment climate considering that this city is a safe city on Papua Island, compared to other cities.
- c. Regulations governing MSMEs include Law No. 20 of 2008 concerning MSMEs, PP No. 7 of 2021 concerning Ease, Protection, and Empowerment of Cooperatives and MSMEs, Presidential Regulation No. 98 of 2014 concerning Licensing for Micro and Small Businesses, Permenkop UKM No. 2 of 2021 concerning Implementation of Micro and Small Business Activities, Law No. 11 of 2020 concerning Job Creation, PP No. 23 of 2018 concerning Income Tax on Income from Businesses received or obtained by Taxpayers with a Certain Gross Turnover.
- d. The existence of a decentralization policy since the reformation has made regions continue to develop according to the local needs of MSMEs.
- e. Collaboration of various parties in the development of MSMEs in Merauke City can be seen from various activities promoted by various institutions in Merauke, to develop MSMEs, such as the MSME exhibition.

### 2. Economy

This aspect includes macroeconomic conditions such as economic growth, inflation, and interest rates. Good economic conditions usually increase consumer purchasing power, while inflation and high interest rates can reduce profit margins.

- a. The rate of economic growth in Merauke City, based on data from BPS, shows a positive trend after the end of the COVID-19 Pandemic, this will affect people's purchasing power and demand for MSME products.
- b. The availability and ease of access to MSME financing from banks and other financial institutions such as cooperatives can be an opportunity to develop MSMEs.
- c. Provision of local government incentives for MSME actors is an opportunity to develop MSMEs.
- d. Inflation is a challenge for MSMEs, because it has an impact on operational costs and also product selling prices
- e. The lifestyle of the Merauke community is a challenge as well as an opportunity because it affects the profit margin and competitiveness of MSMEs.

### 3. Social

This aspect includes changes in demographics, lifestyle, and consumer preferences. These social trends can affect the demand for products and services offered by MSMEs.

- a. The age group, gender, and ethnicity of the Merauke population, which are quite diverse, need to be considered in determining the MSME market segmentation.

- b. The level of education of the community will affect skills and innovation in developing MSME products, the ability to manage a business effectively and efficiently and quickly adapt to change, so that the business has continuity.
- c. The influence of local culture and traditions affects the type of product and acceptance of the goods or services offered
- d. Changes in lifestyle and consumer preferences affect demand for MSME products
- e. The level of public awareness of environmentally friendly products, which has recently been promoted by various parties considering the issue of the climate crisis, is an opportunity for MSMEs to offer products that prioritize sustainable values.

#### *4. Technology*

This aspect includes innovation and technological developments that can create new opportunities or threaten businesses that do not adapt. Adoption of new technologies such as e-commerce can increase the efficiency and reach of the MSME market.

- a. The availability of infrastructure such as the internet is a challenge for MSMEs in Merauke City, considering that in recent years the trend that has occurred is the loss of internet networks.
- b. The level of technology adoption by MSMEs in Merauke City such as the use of e-Commerce still needs to be improved, this is because the rates given by e-commerce are quite high, even though the level of busyness and distance in Merauke City are not too far, and shipping costs are too high, and the need for goods/services offered by MSMEs in Merauke City is not very competitive in the national market.
- c. Social media has been utilized by the community, but the marketing coverage is still limited, has not been able to cover the national area, and this is constrained by shipping costs.
- d. MSME product innovation is still very low and needs to be improved, so that it can compete in the national market.
- e. Technology training programs, research and development to help create better, more innovative products and operational efficiency need to be done more.

#### *5. Law*

This aspect includes laws and regulations that govern business operations, including intellectual property rights and consumer protection. Compliance with the law ensures that businesses operate legally and avoid sanctions.

- a. Law No. 20 of 2008 concerning MSMEs in Indonesia must be complied with, this law contains definitions, rights and obligations, financing, and capacity development.
- b. Consumer protection laws that must be complied with by MSMEs to ensure product quality and safety.
- c. MSMEs can protect their businesses by protecting intellectual property rights on MSME innovations and brands
- d. MSMEs need to take care of business permits in order to obtain their legality, some business permits that need to be taken care of by MSMEs, for example, Business Identification Number (NIB), Micro and Small Business Permit (IUMK), Trade Business Permit (SIUP), Disturbance Permit (HO), Special Operational Permit, Household Industry Food Production Certificate (SPP-IRT), Halal Certificate, BPOM, and so on, depending on the type of business being run.

- e. Environmental regulations that affect MSME operations, especially in waste and resource management, some of which are Law No. 32 of 2009 concerning Environmental Protection and Management, PP No. 101 of 2014 concerning Management of Hazardous and Toxic Waste (B3). Regulation of the Minister of Environment and Forestry No. 75/MENLHK/SETJEN/KUM.1/10/2019 concerning the Roadmap for Waste Reduction by Producers, PP No. 22 of 2021 concerning the Implementation of Environmental Protection and Management.

## 6. *Environment*

This aspect covers matters relating to environmental sustainability issues and increasingly stringent environmental regulations. Businesses that adopt environmentally friendly practices can attract consumers who are increasingly aware of environmental issues and gain support from stakeholders.

- a. MSMEs that depend on certain natural resources are vulnerable to losses in the event of natural disasters or climate change, especially in the agriculture and fisheries sectors.
- b. Excessive exploitation is a major problem in maintaining sustainability, and has the potential to cause scarcity and increase the cost of raw materials.
- c. Increasing consumer awareness of environmental issues is an opportunity for increasing environmentally friendly products
- d. Government support for encouraging environmentally friendly business practices can be in the form of incentives, helping MSMEs switch to more sustainable operations
- e. Pressure from customers, investors, and communities to implement sustainable or environmentally responsible business practices means that MSMEs must adapt in their operations.

PESTEL analysis is a strategic tool used to understand the various external factors that affect an organization or business. PESTEL is an acronym for Political, Economic, Social, Technological, Legal, and Environmental (Mihailova, 2020). Each of these aspects provides valuable insight into the macro environment that can affect the operations and sustainability of a business. By analyzing these factors, organizations can identify opportunities and threats in the market, so they can develop effective strategies to achieve business goals.

Political aspects include government policies, regulations, and political stability that can affect business operations (Al-Hattami, 2024; Mang'ana et al., 2024; Mihailova, 2020). These factors can include changes in trade policies, tax regulations, employment laws, and government subsidy and support policies. For example, changes in tax regulations can affect the profitability of a business, while trade policies can affect the supply chain and prices of raw materials. Political stability is also important because instability can create uncertainty that disrupts business operations.

Economic factors include macroeconomic conditions such as economic growth, inflation, interest rates, and unemployment rates (Mihailova, 2020). Good economic conditions usually increase consumer purchasing power, while high inflation and interest rates can increase operating costs and reduce profitability. Social aspects involve changes in demographics, lifestyles, and consumer preferences. Social trends can affect the demand for products and services, so businesses need to understand and adapt to these changes. Technological aspects include innovations and technological developments that can create new opportunities or threaten businesses that do not adapt (Capobianco et al., 2021). Environmental factors involve issues related to environmental sustainability and

increasingly stringent environmental regulations. Legal aspects include laws and regulations that govern business operations, including intellectual property rights, consumer protection regulations, and employment laws (Zalengera et al., 2014; Barkley & Jokonya, 2024).

Based on the PESTEL analysis, the strategy of MSMEs in Merauke City should emphasize collaboration with the government and other stakeholders to take advantage of available training programs, subsidies, and technical assistance. MSMEs need to strengthen internal capacity by utilizing technology, especially in digital marketing and e-commerce, and increase product innovation to meet changing market demands. In addition, MSMEs must be active in various exhibitions and promotional activities organized by local institutions to expand their networks and introduce their products to a wider market. In addition, it is important for MSMEs to focus on improving managerial and entrepreneurial skills through continuous education and training. They must adopt environmentally friendly and sustainable business practices to attract consumers who are increasingly aware of environmental issues. Diversification of products and services, as well as increasing operational efficiency, should also be a priority to increase competitiveness and ensure long-term business continuity.

The main challenges faced by MSMEs in Merauke City include limited technological infrastructure, especially the internet, which hinders the widespread adoption of e-commerce and digital marketing. In addition, inflation and rising operational costs can affect product selling prices and profit margins. Global and regional economic uncertainty can also impact demand for MSME products. Low levels of innovation and limited access to training and technology development add to the challenges in increasing competitiveness in national and international markets. However, behind these challenges are various opportunities that can be utilized by MSMEs. Positive economic growth in Merauke City after the COVID-19 pandemic has opened up opportunities for increasing people's purchasing power and demand for local products. Government programs that provide incentives and financing support to MSMEs are also a great opportunity for business development. Increasing consumer awareness of environmentally friendly products is creating a new market for products that prioritize sustainability. In addition, easy access to financing from banks and other financial institutions, including cooperatives, provides opportunities for MSMEs to obtain the capital needed for business expansion.

Sustainability aspects are very important to consider in the development of MSMEs in Merauke City, because sustainable businesses not only contribute to environmental sustainability but also increase competitiveness and reputation in the market. MSMEs that adopt sustainable business practices can attract consumers who are increasingly concerned about environmental issues and gain support from stakeholders. Through innovation and operational efficiency, MSMEs can reduce costs, increase profits, and ensure long-term sustainability. Support from government regulations and policies that encourage environmentally friendly business practices also provide a strong foundation for MSMEs to develop sustainably. MSME development strategies in Merauke need to be designed by considering various external factors that influence them. Local governments and other stakeholders need to collaborate in creating a conducive business environment, increasing access to financing, and providing appropriate training and assistance for MSME actors.

Based on the PESTEL analysis, several strategies can be formulated in developing MSMEs in Merauke City as described below. First, the strategy can be carried out by

utilizing local government programs and initiatives that support MSMEs through training, subsidies, and technical assistance, as well as ensuring compliance with regulations such as Law No. 20 of 2008 concerning MSMEs and various related government regulations. Political stability in Merauke City that supports the business and investment climate provides a strong foundation for MSME development, coupled with collaboration between various parties in holding activities such as MSME exhibitions that can expand networks and product promotions.

Second, the strategy is carried out by increasing access to financing for MSMEs through partnerships with banks and financial institutions such as cooperatives, as well as utilizing incentives from local governments. Amid positive economic growth post-pandemic, this strategy also includes developing cost management to reduce the impact of inflation on product selling prices and operations, by optimizing the supply chain, increasing production efficiency, and diversifying products to increase competitiveness and profit margins.

Third, the strategy is carried out by adjusting products and services to the diverse demographics and preferences of local consumers, as well as improving managerial skills and innovation through training and education to create products that meet market needs. A good level of community education supports the ability of MSMEs to adapt to change, while increasing awareness of environmentally friendly products provides opportunities for MSMEs to offer products that prioritize sustainability values.

Fourth, the strategy is carried out by increasing the adoption of technology such as e-commerce and social media to expand market reach and increase operational efficiency, as well as encouraging product innovation through technology training programs and research and development. Improving technological infrastructure, including ensuring reliable internet access, is an important step to support MSME business activities in Merauke, and cooperation with internet service providers and the government is needed to achieve this goal.

Fifth, the strategy is carried out by ensuring compliance with applicable laws and regulations, such as consumer protection and intellectual property rights, to avoid sanctions and increase consumer confidence in MSME products. This strategy also includes facilitating the business licensing process by providing guidance and technical assistance to MSME actors, so that they can operate legally and obtain various benefits from the government and the market.

Finally, the strategy is carried out by encouraging MSMEs to adopt environmentally friendly and sustainable business practices, with the use of sustainable raw materials, good waste management, and promotion of environmentally friendly products to attract environmentally conscious consumers. Government support and incentives, such as subsidies and training, can also be utilized to help MSMEs shift to more sustainable operations, so that they can meet the pressure from customers, investors, and communities to run environmentally responsible businesses.

The MSME development strategy in Merauke City is very important to strengthen the local economy, create jobs, and improve community welfare. With the support of government policies, access to financing, skills training, and adoption of technology, MSMEs can grow more competitively and innovatively. A sustainable and environmentally friendly approach will also ensure long-term business sustainability. Collaboration between the government, private sector, and communities is the key to success in realizing a dynamic and productive MSME ecosystem, so that Merauke can become a center of economic growth in Papua.

## 5. Conclusion

Based on the research conducted, external factors that influence the development of MSMEs in Merauke City with PESTEL analysis include political, economic, social, technological, legal, and environmental aspects. Political stability and regulatory support provide a strong foundation for the development of MSMEs. Positive economic growth, access to financing, and government incentives open up new opportunities for MSMEs, although challenges such as inflation and people's lifestyles need to be addressed. Social factors such as education, culture, and environmental awareness offer opportunities for sustainable product innovation. Technological challenges such as internet infrastructure and e-commerce adoption require more attention, but training and research can increase competitiveness. Compliance with legal regulations and protection of intellectual property rights are important to maintain the legality and reputation of MSMEs. Environmental factors offer opportunities for environmentally friendly products and sustainable operations, but also require MSMEs to address the risks of climate change and resource exploitation. By understanding and utilizing these factors, MSMEs in Merauke City can grow more rapidly and sustainably.

## 6. Theoretical and practical implication

Research on PESTLE (Political, Economic, Social, Technological, Legal, and Environmental) analysis of MSMEs in a city has several significant theoretical implications. Theoretically, this study can enrich the literature on strategic management in the context of MSMEs by providing insight into how external factors affect the sustainability and growth of small and medium-sized businesses. In addition, this study can confirm or modify existing theories, such as the Resource-Based View (RBV) or Dynamic Capabilities Theory, by emphasizing the importance of MSME adaptation to changes in the external environment. This analysis also contributes to understanding the differences in business dynamics in various cities, where local social and economic factors can create variations in the implementation of business strategies.

From a practical perspective, this study can provide insight for MSME owners, local governments, and other stakeholders in designing policies that support the growth of this sector. For example, if the results of the study show that technological factors are the main challenge for MSMEs in a city, then a digital literacy program and better access to technology are needed. If regulatory factors are an obstacle, then local governments can simplify the licensing process or provide incentives for MSMEs that comply with regulations. In addition, this study can help MSMEs identify opportunities and threats in their external environment, so that they can develop more adaptive and sustainable business strategies. By understanding the theoretical and practical implications of PESTLE analysis on MSMEs, this study can contribute to increasing the competitiveness and resilience of MSME businesses to the dynamics of the external environment. This kind of research can also be the basis for government policies and business strategies that are more data-based and in accordance with local economic and social conditions. Therefore, the results of the study are expected to provide benefits to various parties in an effort to support the development of MSMEs in a sustainable manner.

## 7. Limitations and suggestions for further research

This study has several limitations that need to be considered. First, the PESTLE analysis conducted may be limited to data available in a particular city, so the results cannot be generalized to other areas with different economic, social, and regulatory characteristics. Second, this study focuses more on macroeconomic and external factors, while internal factors of MSMEs, such as managerial capabilities and innovation, may not have been analyzed in depth. In addition, the methods used, such as interviews or surveys, may have limitations in terms of respondent subjectivity, which may affect the validity of the research results.

For further research, it is recommended that the PESTLE analysis be conducted with a wider coverage area or compared between several cities to understand the differences in the business environment in various regions. In addition, the study can be combined with the SWOT (Strengths, Weaknesses, Opportunities, and Threats) approach or other strategic management theories to provide a more comprehensive perspective. Further research can also use longitudinal methods to analyze how changes in external factors over time affect the sustainability of MSMEs. With a more holistic approach, future research is expected to provide more accurate recommendations for policy makers and business actors in developing MSMEs sustainably.

## 8. References

- Acs, Z. J., & Audretsch, D. B. (2010). *Handbook of Entrepreneurship Research: An Interdisciplinary Survey and Introduction*. Springer.
- Adiatma, T., Irianto, O., Siamsa, S., & Suwandi, Y. W. (2023). Strategic Management to Envisage the Challenges of Inclusive Economy and Business Innovation: A Bibliometric Study. *Journal of International Conference Proceedings*, 6(5), 47–67. <https://doi.org/10.32535/jicp.v6i5>
- Agustini, F., Aprinawati, A., & Siahaan, S. D. N. (2025). The role of women in managing MSMEs in Medan city. *Implementasi Manajemen & Kewirausahaan*, 5(1), 1-13.
- Al-Hattami, H. M. (2024). Impact of AIS success on decision-making effectiveness among SMEs in less developed countries. *Information Technology for Development*, 30(3), 472-492.
- Bank Indonesia. (2021). *Laporan Perkembangan UMKM di Indonesia*. Jakarta: Bank Indonesia
- Barkley, E., & Jokonya, O. (2024). Factors affecting SMEs emerging technologies adoption in developing countries: A literature review. *Procedia Computer Science*, 239, 1966-1973.
- Barney, J. B., & Hesterly, W. S. (2018). *Strategic Management and Competitive Advantage: Concepts and Cases*. Pearson.
- Beck, T., Demirgüç-Kunt, A., & Levine, R. (2005). SMEs, growth, and poverty: Cross-country evidence. *Journal of Economic Growth*, 10(3), 199-229.
- Capobianco, N., Basile, V., Loia, F., & Vona, R. (2021). Toward a sustainable decommissioning of offshore platforms in the oil and gas industry: A PESTLE analysis. *Sustainability*, 13(11), 6266.
- Christodoulou, A., & Cullinane, K. (2019). Identifying the main opportunities and challenges from the implementation of a port energy management system: A SWOT/PESTLE analysis. *Sustainability*, 11(21), 6046.

- Cinthy, H., & Rustiadi, S. (2023). Proposed Business Growth Strategy for an Advertising Production Company That Penetrates the Small and Medium-Sized Business Market in Jakarta: A Business Case, Rentjana. *Journal of Business and Management Studies*, 5(4), 52–71.
- David, F. R. (2025). *Strategic Management: Concepts and Cases*, (ebook).
- Eierle, B., Hartlieb, S., Hay, D. C., Niemi, L., & Ojala, H. (2022). External factors and the pricing of audit services: A systematic review of the archival literature using a PESTLE analysis. *Auditing: A Journal of Practice & Theory*, 41(3), 95–119.
- Fatmah, F., Supriyanto, E., Budiman, D., Maichal, M., Ghozali, Z., Ismail, H., Sutresna, A., Widyastuti, T. A. R., Pebrianti, T., & Isnaini, S. (2024). *UMKM & KEWIRAUSAHAAN: Panduan Praktis*. PT. Sonpedia Publishing Indonesia.
- Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Pitman.
- Harjoprawiro, L., Mirosea, N., & Basri, A. M. (2024). Strategi Pengembangan UMKM Industri Kerajinan Pasca Covid 19 di Kabupaten Buton. *Jurnal Ecodemica: Jurnal Ekonomi Manajemen Dan Bisnis*, 8(1), 1–8.
- Hiktaop, K., & Kalakmabin, O. (2019). Strategi Pengembangan UMKM (Studi Kasus Masyarakat Adat Bhuyakha Di Distrik Sentani Timur Kabupaten Jayapura). *Musamus Accounting Journal*. <https://www.ejournal.unmus.ac.id/index.php/acc/article/view/3034>
- Hill, C. W. L., Jones, G. R., & Schilling, M. A. (2014). *Strategic Management: Theory: An Integrated Approach*. Cengage Learning.
- Hitt, M. A., Ireland, R. D., & Hoskisson, R. E. (2020). *Strategic Management: Competitiveness and Globalization*. Cengage Learning.
- Huda, A. M., & Martanti, D. E. (2018). *Pengantar manajemen strategik*. Jayapangus Press.
- Mang'ana, K. M., Hokororo, S. J., & Ndyetabula, D. W. (2024). An Investigation of the Extent of Implementation of the Financial Management Practices of Agri-SMEs in developing countries: Evidence from Tanzania. *Sustainable Technology and Entrepreneurship*, 3(1), 100049.
- Mihailova, M. (2020). The state of agriculture in Bulgaria-PESTLE analysis. *Bulgarian Journal of Agricultural Science*, 26(5).
- Namazi, M., & Rezaei, G. (2024). Modelling the role of strategic planning, strategic management accounting information system, and psychological factors on the budgetary slack. *Accounting Forum* (Vol. 48, No. 2, pp. 279-306). Routledge.
- Nandonde, F. A. (2019). A PESTLE analysis of international retailing in the East African Community. *Global Business and Organizational Excellence*, 38(4), 54–61.
- OECD. (2021). *The Digital Transformation of SMEs*. Paris: OECD Publishing.
- Pangestika, P., Santoso, I., & Astuti, R. (2016). Strategi Pengembangan Potensi Usaha Mikro Kecil dan Menengah (UMKM) dengan Dukungan Kucuran Kredit (Studi Kasus: UMKM Kabupaten XYZ) The Development Strategy of Potential Business of Micro, Small, and Middle Enterprises (MSMEs) with Financial Credit Supporting Program (Case Study: MSMEs of XYZ Regency). *Jurnal Teknologi Dan Manajemen Agroindustri*, 5(2), 84–95.
- Porter, M. E. (1980). *Competitive strategy: Techniques for analyzing industries and competitors*. Free Press.
- Putri, D. A. S., & Kusuma, A. I. (2024). Innovation and change management strategies to strengthen the competitive advantage of MSMEs in Bengkulu. *Implementasi Manajemen & Kewirausahaan*, 4(2), 193-209.

- Sahoo, S., Mohanty, A., & Mohanty, P. P. (2025). Strategies for enhancements of MSME resilience and sustainability in the post-COVID-19 era. *Social Sciences & Humanities Open*, 11, 101223.
- Saputra, A. A., Silalahi, B. S., Holid, A., Andini, F. K., Rukmana, A., Adiatma, T., Lamawitak, P. L., & Sihite, T. S. (2024). *Pengantar Ilmu Manajemen*. PT Penamuda Media.
- Sarfiah, S., Eka Atmaja, H., & Marlina Verawati, D. (2019). Umkm Sebagai Pilar Membangun Ekonomi Bangsa Msmes The Pillar For Economy. *Riset Ekonomi Pembangunan*, 4(1). <https://doi.org/10.31002/rep.v4i2.1952>
- Sinha, K. J., Sinha, S., & Sinha, B. J. (2024). Micro, Small, and Medium-Sized Enterprises (MSMEs): The significant role and challenges in Indonesia's economy. *International Journal For Multidisciplinary Research*, 6(3), 20824.
- Subaktilah, Y., Kuswardani, N., Yuwanti, S., Magister Teknologi Agroindustri, P., Teknologi Pertanian, F., Jember Jl Kalimantan No, U., & Tegalboto Jember, K. (2018). Analisis SWOT: Faktor Internal dan Eksternal pada Pengembangan. *Jurnal Agroteknologi* (Vol. 12, Issue 02).
- Sudiantini, D., & Hadita, S. P. (2022). *Manajemen Strategi*. Purwokerto: CV. Pena Persada.
- Sugiarti, E., Supratikta, H., & Catio, M. (2022). *Manajemen Strategi*. Unpampress.
- Sulistiyowati, R. S., & Hadipranata, Q. A. C. (2021). Analisis SWOT Dalam Menentukan Strategi Keberlanjutan Usaha Dapur Warna Di Era New Normal.
- Takari, D., Ompusunggu, D. P., & Sari, M. A. (2025). The Role of Micro, Small, and Medium Enterprises (MSMEs) in Central Kalimantan in Community Economic Welfare. *Asian Journal of Social and Humanities*, 3(5), 922-929.
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533. [https://doi.org/10.1002/\(SICI\)1097-0266\(199708\)18:7](https://doi.org/10.1002/(SICI)1097-0266(199708)18:7)
- World Bank. (2020). *MSME Finance Gap: Assessment of the Shortfalls and Opportunities in Financing Micro, Small, and Medium Enterprises in Emerging Markets*. Washington, DC: World Bank.
- Zalengera, C., Blanchard, R. E., Eames, P. C., Juma, A. M., Chitawo, M. L., & Gondwe, K. T. (2014). Overview of the Malawi energy situation and A PESTLE analysis for sustainable development of renewable energy. *Renewable and Sustainable Energy Reviews*, 38, 335–347.